

HISTORIC STRUCTURE REPORT

THE PARSON CAPEN HOUSE

The Topsfield Historical Society
Topsfield, Massachusetts



Finch & Rose

PRESERVATION & DESIGN CONSULTANTS

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INTRODUCTION

The primary purpose of this Historic Structures Report is to document the extant physical fabric of the Parson Capen House and related historic documents provided by the Topsfield Historical Society (THS) relative to the early historical development of the house and its 1913 restoration. The Report also provides an overview of physical conditions and issues concerning interpretation. The study was focused on a series of questions posed by the Topsfield Historical Society, and the report is organized around those questions in the following order.

1. Was the house constructed as a complete two-over-two Hall/Chamber structure at a single time? Or, was it built originally as a one-over-one structure, and subsequently extended?
2. Is the interpretation of the room usage correct?
3. Is there any evidence for the existence of lean-tos, ells or appendices?
4. Are there any elements from the First Period remaining on the exterior?
5. To what extent is the exterior aspect speculative, especially the drop pendants? Are the overhangs original or speculative restorations?
6. What was the original fenestration pattern?
7. To what extent does the interior woodwork and decoration represent the First Period versus the 1913 restoration?
8. Are the hearths and chimney stacks complete restorations? Or, are they repaired and re-worked?
9. The second floor chambers have undergone considerable alterations, most probably by Dow in order to create a caretaker's apartment. Is there sufficient important historical fabric remaining to warrant reverting either of these chambers to their 17th C. appearance?
10. Can the timber frame be pictorially represented, and how does it relate to other known examples in Essex County?
11. Are there any major recommendations regarding the house condition, and any urgent corrective actions required to preserve the house from deterioration?

This report has been prepared William Finch of Finch&Rose, historic preservation consultants of Beverly, Massachusetts. Jean Busch of the Topsfield Historical Society coordinated our research at the building and compiled the documentary material on the house from the Society files and other sources for our review. John Butler of Hollis, New Hampshire aided the on-site investigation by carefully opening up selected portions of the building and assisting in the evaluation of the physical evidence. Additional on-site assistance was provided by Norm Isler and Bill Whiting, both of the THS. Wayne King, structural engineer of Ocmulgee Associates of Ipswich, Massachusetts provided structural evaluation for several areas of deterioration to the framing that were discovered in the course of the investigation. The field work for the report was performed during the spring and fall of 2001 and the winter of 2002.

The research methodology consisted first of a detailed review of all available archival sources concerning the house with a focus on the historic photographs and notes by William Sumner Appleton in the archives of SPNEA that concerned Dow's 1913 restoration. In addition to the Topsfield Historical Society collections, Jean Busch reviewed the collections of the SPNEA, the Massachusetts Historical Society, and the Peabody–Essex Museum Library for archival material relating to Dow. Existing documentary material concerning the Chain of Title, wills, and taxes were not re-researched, as our charge was limited to investigating the physical fabric of the building. However, it became apparent during the study that more extensive documentary research is needed to obtain a clearer picture of how the house and land passed from the Capen family into the Emerson family. The need is to both accurately map the land transactions and to more fully trace the family relationships and places of residence including various cousins. Additional information on Charles H. Holmes including his places of residence during the period he owned the house between 1835 and 1886 would also be useful. This information will facilitate a fuller understanding of the house.



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Second, the existing visible building fabric was examined in relation to the detailing evident in the historic photographs. Finally, selected areas of interior and exterior finishes were removed to better understand the original framing and fenestration as well as to look for evidence of early finishes that had been covered over by Dow's restoration materials. All the rooms and numerous details were photographed to document both the existing state of the house and specific evidence relevant to the questions we were charged to investigate.

This combination of activities was then synthesized to develop our conclusions regarding the architectural development of the house and prepare this report. Much of the information is presented visually on a series of 11" x 17" sheets integrating annotated photographs and drawings. The text sections of the report provides specific responses to the questions posed by the Society, a room by room inventory of existing historic fabric and finishes, and an overview of condition issues with treatment recommendations, and interpretation concerns. Specific photographs and drawings are referenced in the text by numbers in parenthesis, the first number referring to the sheet number and the second to the specific figure on that sheet.

Prints of all the non-digital photographs taken in the course of examining the building are provided in a separate volume. These are not captioned, and are provided simply to form an archival record of the state of the building at the time of the study. All photographs and the framing drawings of current conditions in the report are by William B. Finch. Floor plans are adopted from the plans published by Donald Millar in 1916. All historic photographs are reproduced from prints in the SPNEA Archives in Boston unless otherwise credited in the specific captions.

The following is a summary of ownership and periods of substantial physical change to the Parson Capen House to provide background for the report text. A more detailed "Chronology of Important Dates, Documents, and Recent Repair Records" is provided at the end of the report. Copies of relevant documents including 1913-14 letters from Appleton and Dow are provided as an Appendix, which is bound as a separate volume.

- 1683 - 1725** Original construction and occupancy by the Rev. Capen.
- 1725-1760's** Probable period of remodeling to early Georgian Style (i.e., Second Period) with occupancy by Nathaniel Capen and possibly his nephew John Baker. Major known changes include removal of original oak clapboards that had been applied directly to the studs and brick nogging, the installation of board sheathing (i.e., underboarding) to the studs, the application of clapboards over the sheathing, and the replacement of the original casement windows with single hung Georgian sash and frames of larger size than the original openings with changes to the studs to accommodate the new width or in some cases new window positions. The brick nogging was retained in this remodeling.
- 1770's-1830's** Period of little likely remodeling activity other than possible addition of some interior partitions with ownership by John Emerson and heirs and usage by house farm hands as documented by Rev William Bentley in 1814, who noted the ceiling joists were still exposed. Details of occupancy, including whether John Baker continues to live in it after sale to John Emerson, who was the father of Baker's wife, are not known.
- 1830's-1886** Period of substantial remodeling including much interior replastering with new ceilings over the joists, finishing attic rooms, bricking over fireplaces, changing sash to 6/6 configuration, and replacing clapboards with wood shingles. Owned by Charles H. Holmes and his wife (an Emerson heir). During the later part of this period the house was rented by Holmes to a Mrs. Alonzo Kneeland.
- 1886-1913** Period of clouded title and usage under the Estate of Holmes, and then other owners. Purchased by Topsfield Historical Society and restored by George Francis Dow in 1913. The actual restoration, according to Topsfield Historical Society records, started in the summer of 1913 and was finished by January of 1914.

SUMMARY OF FINDINGS

This study has confirmed that much of Dow's 1913 restoration is by today's standards of scholarship inaccurate and dated. Where the historic fabric was missing and the evidence of original detailing inscrutable, he invented solutions to create a stage set for his vision of 17th century life. The windows and use of feather edged sheathing on the interior are the most obvious examples of inaccurate restoration treatment.

Despite these issues, Dow's restoration has effectively preserved the essential and highly significant first period components of the house that had survived up to 1913 such as the exposed frame of the ceilings and walls, the exterior overhangs, the bracket on the west gable, and the clay insulation below the parlor floor. The other brackets and drops restored on the exterior are based on reasonably sound evidence. The basic interpretation of the house with a two room hall/parlor plan of single build is also historically correct.

Without Dow's efforts the house probably would not have even survived, and its highly important original frame would have been lost. The restored features and overall effect of the house created in 1913 remain largely intact and are now a primary example of Dow's substantial influence on the early 20th century preservation movement. The 1913 restoration now warrants preservation and interpretation in its right.

It is recommended that the Society's interpretation should focus both on the actual first period frame, and on presenting the restored aspects of the house as an intact example of Dow's vision and the early 20th century attitude towards 17th century America. Re-restoring Dow's errors to create a more accurate presentation is not recommended, as there is not sufficient evidence. The parlor chamber does not retain sufficient evidence of its first period detailing to warrant restoration; it should be left largely as is and used as gallery space. The hall chamber could be used as a "study room" by removing some of the plaster finishes to expose the unrestored frame and ceiling and displaying interpretive panels about Dow's restoration and first period architecture.

Significant condition issues include the following:

- Defective exterior components of window frames and hardware, and severe damage to sash interiors from squirrels require selective replacement and repair.
- Chimney top problems including lack of screening to keep out squirrels, spalled and loose brick along with open mortar joints, and the lack of a ventilating cap.
- Chronic dampness along the north wall with severe area of rot to the water table adjacent to the rear furnace chimney.
- Lack of adequate ventilation and dampness in the cellars, especially the west cellar.
- Scattered debris on the floor of the west cellar that invites insect infestation.
- Signs of recent insect activity in the front sill of the west cellar that should be further examined to determine if it is currently active.
- Deeply rotted section of overhanging front girt above hall summer beam that warrants repair.
- Other areas of old frame damage including past movement in rear wall, insect damaged cellar framing, and moderate sag of attic purlins that warrant monitoring for signs of new movement or deterioration.
- Scattered areas of severely weathered clapboards and trim components that should be selectively replaced with white oak matching Dow's work; eventual replacement of all clapboards and trim with new white oak stock, possibly left to weather naturally as intended by Dow should be considered.
- Plumbing is no longer needed and poses a risk of water damage from leaks; consider removal.

WAS THE HOUSE CONSTRUCTED AS A COMPLETE TWO-OVER-TWO HALL/CHAMBER STRUCTURE AT A SINGLE TIME? OR, WAS IT BUILT ORIGINALLY AS A ONE-OVER-ONE STRUCTURE, AND SUBSEQUENTLY EXTENDED?

The following existing details of the house have raised speculation that the house might have been constructed in two stages.

- The difference in the floor height between the parlor and hall, and the fact that the floor height of the stair hall is 3" and 4" below both the parlor and hall, respectively.
- The low ceiling height in the hall, which is several inches lower than the parlor ceiling.
- The parlor being wider than the hall and having two summer beams while the hall has one.
- The front and rear plates are each made of two parts connected with a visible joint in the chimney bay.

After looking at the details of the frame on both sides of the house and considering the history of deterioration and alteration of the sills, our opinion is that the entire house was built with its current Hall/Chamber plan in a single construction campaign. The shape and details for the studs, braces, posts, the attic gable overhangs, and the rafters are identical in the east and west portions of the house. Furthermore, there is no evidence that any of the chimney bay framing once functioned as an exterior end bay.

The roof rafter bents have assembly numbers incised at the joints. While we did not see all the numbers, we did see the number II on the second bent from the east end (i.e., the hall summer beam bent), IIII on the westerly chimney bent, and V on the parlor chamber summer beam rafter bent (Fig. 15.8). This is the proper sequence assuming the numbers start at the east end gable bent. One would not expect the bents to be numbered 1 - 6 if the house was constructed in two stages unless the entire roof was rebuilt with the second stage. This is extremely unlikely based on the consistency in the dimensions and detailing of the frame members to which the rafters are joined in all six bents.

The surviving first floor studs that appear to have served as window jambs in the parlor are deeper and wider than the other wall studs and protrude into the room slightly beyond the line of the original plaster (Fig. 3.4). The window studs in the hall have been replaced or altered, but four unaltered ones remain concealed by the furred out plaster walls of the hall chamber. These are identical to the parlor studs with clear evidence that they originally protruded beyond the face of the finish plaster (Fig. 3.3, 5.4). The use of this unusual feature on both sides of the house suggests the house was built at one time.

Joints in the front and rear plates are common in first period construction and occur when a long enough timber was not available to make the plate in one piece. The pins for the joint in the front plate can be clearly seen in the second floor stair hall (Fig. 13.6). The pin pattern clearly indicates it is a bladed scarf joint. Bladed scarf joints are the usual method to join the two parts of the plate when the frame is initially raised. When the frame is extended after the initial construction, the joint made to lengthen of the plate is usually a much cruder short lap joint or simple butt joint without any pins. The nature of the joint in the rear plate could not be confirmed because the pins are covered by a trim board that rises through the ceiling into the attic.

The front overhanging first floor girt has a bridled scarf joint a few feet west of the westerly chimney girt where one would not expect a joint if the house was constructed in two stages (Fig. 17.5). A similar pattern of scarf joint types and locations occurs at the Boardman House in Saugus (Fig. 17.4).

A section of the overhanging girt in the chimney bay was replaced in the Dow restoration or earlier. This could be misinterpreted as evidence of that the house was built in two stages (Fig. 17.6).

The inner front first floor girt appears to be a single piece of wood (unless the joint is somehow hidden where it passes over one of the chimney posts). A single piece would be impossible in this location unless the house was constructed in a single build. The rear first floor is three separate pieces each running between the posts. This is normal when the posts are of two story height, as running the girt through the posts would severely weaken them.

The differential settlement of the house frame over time due to rotting sills is the likely explanation for the variation in floor heights rather than the original construction detailing. Currently all the sills are replacements except possibly a short section of the east sill. It appears from the 1913 photographs that most of the sills were replaced at that time by Dow, and there may have been additional replacements in the last 50 years.

One of the 1913 photographs shows the the entry hall without any flooring or framing in place (Fig. 11.3). All the current framing under the entry floor is replacement material installed by Dow and is over a very shallow crawl space. Th original framing had probably rotted out and caused the staircase and entry flooring to drop several inches. Dow apparently stabilized the remaining early elements at that height with new framing and flooring. Comparison of the one 1913 photograph showing the staircase with photos taken after the restoration indicate Dow reworked the configuration of the lower two or three steps (Fig. 13.1, 13.4).

Regarding the perception that the hall has a lower ceiling height than the parlor, this is partially due to the hall summer beam being two inches deeper than than the summer beams in the parlor (13" deep vs. 11" deep. The substantial differential settlement of the hall framing also contributes to this perception (Fig. 8.1, 8.2, 8.4). The settlement of the house has been greatest at the rear wall of the hall. As a result the rear end of the hall summer beam is about 6" lower than its front wall end relative to the existing floor height. The ceiling at the front end of the summer beam is about 2" lower than the ceiling at the door to the entry hall. The unevenness of the ceiling height has been masked at the second floor by heavily shimming the finish flooring added over the original floor in 1913.

The use of two summer beams in the parlor and one in the hall is a function of the greater width of the parlor. As the single summer beam in the hall carries a greater floor area than each of the two summers in the parlor, structural logic would dictate that it should be deeper to carry the increased load. As the proportions of all three summers are similar (i.e., deep and narrow) it seems logical to conclude they were done by the same carpenter. The differences in room sizes is often a characteristic of houses that have grown from a one room plan to a two room plan, as in the John Ward house in Salem or the Whipple House in Ipswich. But without other firm evidence the asymmetry is not sufficient to conclude this house started with a one room plan.

The most definitive evidence of growth from a one room to a two room plan usually occurs at the junction of the two sections. If the added framing is joined into the original end bay, the original end wall girts and posts will have empty mortise pockets from the studs and braces that were removed to install doors between the sections. This is the case in the John Ward House in Salem, and the Felton Sr. House in Peabody. There may also be traces of the original exterior finishes such as evenly spaced nail holes for clapboards. Frequently an entirely new frame is constructed right next to the original end wall. In that case the redundant posts and girts will be the obvious evidence. When the added frame has different floor heights or roof pitches from the original one it is likely it is a reused frame that was moved as an addition rather than constructed on the spot. The Dexter-Haskell house in Beverly is an example of the latter case. There is no evidence of either type at the Capen House.

IS DOW'S INTERPRETATION OF ROOM USAGE CORRECT?

Because both the parlor and hall fireplaces had suffered major alterations to their north ends, including the installation of later bake ovens, there have been concerns that the west room might actually have functioned as the original hall and the east room as the parlor. Supporting this theory is the somewhat larger size of the west room, and the presence of a large original cellar space beneath it to provide convenient food storage. That this cellar cannot be accessed directly from the east room and that most first period houses had a cellar under only one room further supports the theory that the west room functioned as the original hall.

A careful examination of the 1913 photographs of the fireplaces along with the extent of original masonry and woodwork still present today refutes this theory and provides firm support for Dow's interpretation. Both fireplaces as restored by Dow are accurate to their original dimensions with the east room fireplace being substantially wider than the west room fireplace. Although first period hall and parlor fireplaces are sometimes of similar dimensions, when one is substantially wider it is usually located in the hall. The added width is used to accommodate the bake oven and related cooking/service activities of the hall.

At the east room fireplace, the north corner and jamb masonry was substantially altered by the later bake oven, but the original wood lintel and cover board remain in place to substantiate the width of the original fireplace at the east room fireplace (Fig. 9.1). The recessed rear brick panel as visible in the 1913 photograph appears to be unaltered original masonry. Recessed panels were usually centered on the rear fireplace wall. Using its placement to locate the center of the fireplace provides another basis to confirm the original width of the east fireplace.

The relatively narrow width of the west room fireplace can be confirmed by similar methods. Based on the 1913 photographs (Fig. 12.1) the width of its recessed panel was not altered by the introduction of the later bake oven. The lower masonry of the north corner retains the curved form of the original construction and does not appear in the 1913 photograph to have been altered by the bake oven. The face of the north jamb in the 1913 photo appears to be original and is not integrated into the obviously later brick that forms the wall to the left of the fireplace. The existing coverboard can be verified from the 1913 photographs as the board that was present beneath the 18th century panel removed by Dow. These photographs verify that the coverboard is either original or very early.

The relationship of the original west cellar the hall and the dating of the east cellar present questions relating to the room usage than cannot be fully resolved from the available evidence. The first period norm is a single small cellar that was directly accessible from the kitchen (i.e., hall) for the storage of food and dairy products. This cellar was usually under the parlor with access by a straight staircase from the hall leading under the front stair to the cellar. At the Capen House there has never been a cellar stair and thus no direct access from the hall (east room) to the parlor (west) cellar. The west cellar is unquestionably original, but there is not sufficient physical or documentary evidence to confirm the age of the smaller east cellar. One can speculate that the hall cellar was constructed as an original feature to serve as a dairy with direct access from the hall by way of the trap door that still exists, and that the larger parlor cellar was intended to provide longer term storage for food and other items. The presence of two original cellars in first period construction is unusual, but according to *Cummings* there are several documented examples including the Fairbanks House in Dedham. In the absence of detailed inventory, building contract or other documentation, there is no basis to definitively determine the age and original function of the hall cellar.

The unanswered questions regarding the cellars are not sufficient grounds to disregard the clear evidence for the first floor room usage provided by the fireplaces.

ARE THERE ANY ELEMENTS FROM THE FIRST PERIOD REMAINING ON THE EXTERIOR?

The only visible original first period fabric on the exterior occurs at the overhang of the east and west attic gables and limited portions of the front overhang.

At the west gable the central bracket below the overhanging attic girt is original based on its presence in all the pre-restoration photographs dating back to the 1880's (Fig. 1.1). To verify that the existing bracket is not a replacement, the 1913 photographs were blown up and the visible wood grain and weathering patterns were compared to the current bracket (Fig. 2.1, 2.2). The patterns were the same. The large knot in the end grain of the lower edge of the bracket is the most obvious feature still visible in the current bracket. Although the 1920 Old Time New England (OTNE) article by Donald Millar on the restoration cannot be taken as fully accurate in the absence of other evidence, Millar specifically identifies this bracket as an original feature.

The overhanging end girts at both ends were also verified as original by examining their interior faces as visible at the ends of the rear attic eaves crawl spaces (Fig. 15.1). The quarter round chamfer and stops at the lower outer edge of the girts is also an original feature. However substantial sections of the chamfer and stops have been pieced in with new work to restore portions that were apparently damaged. The determination that the chamfer is original is based on faint evidence in the Appleton photos and the fact that portions of the chamfer can be clearly seen to be worked in the original wood of the girt while the repairs are clearly let in as Dutchman. If Dow added the chamfer to embellish the girt, it seems unlikely he would have combined Dutchman with working it in the solid. The other trim boards and moldings associated with the overhanging girts mostly date to the Dow restoration and are conjectural in design.

The inner portions of the projecting front and rear plates supporting the end girts are also original. These are shown in the 1913 photographs as extending to the outer edge of the end girts (Fig. 2.7). The position of the mortises for brackets or drops indicate they originally extended beyond the end girts. Dow pieced these out with extensions to carry verge boards projecting about 6" beyond the clapboards. In piecing them out he cut off the outer few inches (probably to remove rot), so that only the inner 6"- 8" of the original remains. The joint line between the original girt and the added sections can clearly be seen in closeup photographs of the drops (Fig. 2.6).

At the front overhang, the projecting portions of the girts and summer beams are original (Fig. 2.3, 2.8). The vertical trim board attached to the ends of the girts is very old and possibly original or 18th century. It is now covered by another modern trim board at the base of the clapboards. Removal of the fiberboard soffit and associated insulation reveals the original outer overhanging girt along with an early soffit board. The chimney bay section of the outer overhanging girt has been replaced with a newer piece of hewn oak (Fig. 2.3, 17.6), probably by Dow (the junction of the old and newer section is visible in an Appleton photo).

TO WHAT EXTENT IS THE EXTERIOR ASPECT SPECULATIVE, ESPECIALLY THE DROP PENDANTS? ARE THE OVERHANGS ORIGINAL OR SPECULATIVE RESTORATIONS?

This section systematically reviews all the components of the exterior starting with the overhangs, brackets, and drops in terms of the accuracy of Dow's restoration relative to the evidence on the building and period typical details.

Overhangs

The overhangs are original features with most of their original structural fabric remaining in place, as discussed in the previous section. Most of the trim associated with them including the drops and brackets are restored based on fairly well grounded speculation. The current modern soffit board inside the front overhang dates to the last 50-60 years and was installed to support modern insulation for the floor above. It is evident from one of the 1936 Historic American Building Survey photos that Dow left this space open to the underside of the very old board that covers the bottom of the second story floor boards. Appleton also comments in a letter that the soffit was likely not boarded in.

Brackets

As stated in a previous section the bracket at the center of the west attic overhang is an original element. By logical extension the restoration of a similar bracket to the east attic overhang is a reasonable treatment. The restored bracket was fabricated with a tenon that extends into a mortise in the underside of the girt. There is no information as to whether Dow cut the mortise or if it was already present. Obviously, if there was no evidence of a mortise in this location the restoration of the bracket would be speculative in spite of the original one on the west facade.

The two brackets at the chimney girts of the front facade are restored based on the firm evidence of mortises with holes for pins in the underside of the chimney girts, and gains (long vertical mortises) cut into the outer face of the chimney posts. This evidence was photographed by Appleton in 1913 (Fig. 2.4, 2.5). Both gains and the hall chimney girt still had remnants of the bracket tenons in them in 1913. The length of the post gains presumably dictated length of the brackets, although this cannot be verified without removing the current bracket. Basing the design of the bracket on the surviving original gable bracket was a reasonable assumption by Dow.

Pendent Drops at Front Overhang

There is no firm evidence for the presence of these two drops such as was found at the Boardman House in Saugus (Fig. 2.9) because the ends of the overhang corner posts had been cut off long before Dow's restoration. There is a 1913 photograph of the southwesterly post end showing that it had been cut back flush to the bottom face of the end girt, exposing the girt tenon within the post (Fig. 2.10). There is no photograph of the southeasterly post end, but currently the original wood of the post extends only about 6" below the bottom of the end girt (Fig. 2.8). Appleton would likely have photographed it if there was any evidence in its remaining end. Millar states that the form of the restored drops was copied from the surviving original one at the Brown house in Wenham. Given that the southeasterly post extended more than 6" below the end girt, it seems likely it would have had some type of decorative termination. The restoration of the overhang corner drops at the Capen House is thus speculative but well based on period practice.

Pendent Drops at Roof Corner Overhangs

Appleton apparently questioned the use of drops rather than brackets at these locations based on a March 9, 1914 letter from Dow to Appleton defending his decision to install the drops instead of

brackets. Dow's letter concludes with "I do not think that there is an iota of evidence that brackets should supplant the drops on the gable ends." He does not, however, explicitly state that he examined the posts behind the sheathing at these locations as he did at the front overhang.

The 1913 Appleton photographs document the presence of mortises and related pins in the underside the projecting plates at each of the four corners (Fig. 2.7). The mortises are firm evidence for the original presence of either brackets or pendent drops. There are no photographs or other verifiable information documenting the presence or absence of gains in the face of the posts below the overhanging plates, such as was found at the front chimney posts (the posts are still covered with corner boards and sheathing in Appleton's photos). If there are no gains one could be sure the plate mortises were for pendent drops approximately as restored by Dow. The presence of gains would indicate the corners were finished with brackets similar to the one in west gable rather than the drops restored by Dow.

Determining the presence of such gains would require removing a corner board followed by cutting away the sheathing boards in line with the mortise in the plate above to reveal the structural post. This would involve considerable effort, but is the only way to settle this question with any certainty.

Based on areas that have been opened up in this study, Dow did not remove sheathing boards further than was necessary to carry out structural repairs to the sills and first floor studs. A letter written by Appleton states that Dow had finished the structural repairs at the time of his October 1913 visits to the house, and that Dow did not intend to remove the second floor sheathing other than perhaps a board or two to satisfy his curiosity. Thus, he probably did not look for gains in the upper portion of the posts.

One can speculate that Dow decided on drops rather than brackets because of the position of the mortises in the plates compared with the position of the mortises where there had clearly been brackets. The plate mortises extend at least to the outer face of the sheathing that was applied to the overhanging girts (Fig. 2.7), while the gable wall bracket extends only to the bead in the overhanging girt (Fig. 2.1). Thus, brackets at the plate would have been deeper than the one in the center of the gable. Compared with the mortise on the chimney girt at the front overhang (Fig. 2.3), the back of the plate mortise appears to start a couple of inches further out from the post. As indicated by Dow in his March 9 letter, this is one reason Dow chose pendent drops at this location.

Oak Clapboards

Dow's use of oak clapboards (as opposed to pine or cedar) is supported by the presence of oak clapboards being used to support clay insulation in the cellar under the parlor floor (Fig. 16.5). The lath that still exist at the back of the parlor closet under the stairs are oak, and may have been made from leftover clapboard stock (Fig. 11.6). Our investigation of the front overhang between the hall windows revealed a small piece of tapered oak stock that may be an original clapboard.

A pattern of regularly spaced and vertically aligned obsolete nail holes in a few studs and posts is visible in some of the 1913 Appleton Photos (Fig. 6.3). These suggest the original clapboards were nailed directly to the studs and that the sheathing boards (i.e., underboarding) were a later change. This was confirmed by the removal of a sheathing board in the west facade to check the studs for evidence of original windows (Fig. 4.1). The sheathing board removed was secured with wrought nails and had not been disturbed by Dow (He had installed supplemental studs from the interior before he replastered the walls). When all the nail holes in the sheathing were compared to the nail holes in the studs, a regular pattern of nail holes spaced about 3'-4" vertically was found in the original studs that did not have corresponding holes in the sheathing (Fig. 6.1, 6.2). This supported the evidence in the Appleton photos and indicated the original clapboard spacing in this area was 3"-4" to weather. The stud next to the current west wall parlor window that was believed to have been

added later had only nail holes that aligned with holes in the sheathing, confirming it was installed after the original clapboards had been removed (Fig. 4.4, 4.5). Because the upper end of this stud was let into a face gain in the plate rather than a closed mortise like the original studs further confirms it as an addition.

Substantial amounts of original oak clapboards nailed directly to the studs have been found at the Boardman House in Saugus, and the Bridges house in Andover, as well as others (Fig. 4.4, 4.6). Pine clapboards used in this manner have also been found at the Abraham Browne House in Watertown.

The board sheathing is assumed to have been first installed in the 18th century in conjunction with changing the windows, based on the wrought nails securing it and the alterations to the stud pattern in the window bays being done at the same time. The nailing pattern on the sheathing from cladding was too chaotic to determine for certain whether the house was reclad with clapboards at that time or if shingles were used. Shingle nails removed from the sheathing boards we exposed between the hall front windows were early (c. 1790's - 1820) cut nails and appeared to be from the wall shingles removed by Dow.

Dow installed the restoration clapboards in short lengths with lapped and skived ends similar to general 18th century period practice. He used cut nails with a simulated wrought head. His nailing pattern and the alignment of joints between clapboards as revealed in the post restoration photos is somewhat random and does not strictly conform to the spacing of the studs. The joints between original clapboards and their nailing would have had to align on the studs because of the lack of sheathing. That alignment produces a visual pattern that is lacking in Dow's installation (Fig. 6.4, 6.5). The pattern of nailing and joints has been further obscured since 1913 by the random replacement of deteriorated clapboards with stock of longer lengths and more random nailing. Initial replacements were also done in oak, but more recent replacements have been done in pine or cedar that further alters the 1913 restoration pattern.

Dow left the clapboards and trim unpainted to recreate what he assumed was their original treatment (Fig. 1.2). This was a valid assumption for the clapboards based on the few known examples that can be documented, although the trim might have received a deep red or red-brown stain as documented at the Ross tavern in Ipswich. The building was left with a naturally weathered finish (Fig. 1.3) until the 1960's or 70's when an opaque brown stain was first applied (Fig. 1.6).

The Millar OTNE article states that Dow used red oak for the clapboards, but the single one tested proved to be white oak. White oak is substantially more rot resistant than red oak. We cannot be sure that the one we tested is an original Dow clapboard as opposed to a later oak replacement. The lapped ends on the ones removed on the west gable for the window investigation had been skived using a table saw rather than a traditional draw knife. This produced an angled cut at the end because a table saw cannot cut the compound angle required to get a straight cut. A drawknife is readily manipulated to produce a straight cut with the required taper. The difference is not visible at the exterior clapboard surface, but the sawn lap of the clapboards may be too short to make a good waterproof joint.

The combination of a uniform dark brown stain or paint and the replacement of many of the 1913 oak clapboards with unweathered pine or cedar of longer lengths has considerably altered the appearance of the exterior from Dow's 1913 restoration.

Trim

Dow's use of corner boards and other related flat trim mimics the old trim that was visible in the pre-restoration photographs (Fig. 1.1). The old trim may have dated back to the installation of the sheathing in the 18th century, but any original first period trim would have been removed when the sheathing was installed.

The limited evidence of corner treatments that have been found on first period buildings indicates that clapboards were usually run to the corner without any corner boards. Typically the front clapboards would run slightly beyond the corner, and the side clapboards would butt into the overlapping back of the front clapboards. Surviving examples include the southeast corner of the Wadsworth House in Cambridge and the 1714 bell tower encapsulated within the 1728 roof of the First Church in Marblehead (both are early Georgian structures). Dow may not have been aware of this practice in 1913. By c. 1920 Appleton was restoring both the Browne house in Watertown and the Balch House in Beverly without cornerboards.

The very few surviving water tables on first period houses are about a foot high and an inch thick (Boardman House and Bridges House). The Dow watertable is a little lower and thicker, but is generally similar.

Verge Boards

The position of the bracket/drop mortises extending to the outer edge of the front and rear plates as documented in the Appleton photographs provides strong evidence that the plates originally projected several more inches beyond the plane of the attic gable clapboards to carry a similar projection of the roof beyond face of the gable (Fig. 2.7). By inference the roof purlins originally had a matching projection to carry the roof sheathing boards beyond the end rafters. There is no evidence as to whether or not the plate and purlin ends originally carried verge boards to provide a stylish finish to the projecting roof edge, as their outermost ends were cut off in the 18th century. If the ends were present, the weathering patterns and the presence or absence of nail holes would determine whether verge boards were present. However, given the pretension of the house and the station of its builder, it is reasonable to assume there would have been verge boards. The detailing of the boards is purely speculative, as no surviving projecting verge boards are known.

Projecting purlins and plates have survived on one end of the Bridges House in North Andover. In that case the lack of clear nail holes and the unevenness of the end cuts suggest there may not have been any verge boards.

Doors

The front door is a speculative restoration based on the so called "Indian Door" preserved at Deerfield from the Sheldon House, and is fitted to the 18th century door opening that was present at the start of the restoration. The door casings are also from the Dow restoration. A paneled and battened door in storage in the rear shed fits the current opening and is the 18th century door that Dow replaced.

The board and batten door and casings in the east gable is a speculative restoration based on typical 18th century utilitarian doors. It is fitted to a door opening that was initially installed in the 18th century, and probably replaced an original double casement window. The northerly stud for this door is the primary evidence that this was an 18th century change, as it is nailed with wrought nails into an angled gain in the face of the plate (Fig. 5.3). If it was original the stud would be tenoned into a blind mortise secured with a peg visible on the interior face of the plate. Heavy wear in the hall floor indicates this door received heavy usage (Fig. 10.7). A crude entry vestibule in the form of a leanto addition was present at the start of the restoration (Fig. 1.4).

Windows

The windows are all speculative restorations located in the openings of the 18th/19th century windows. Dow was apparently unable to locate evidence for the size and location of the original windows. Refer to the section on Windows for more detail on this topic.

Chimney

The chimney as visible above the roofline is a speculative reconstruction based on 19th century photographs of the pilastered chimney at the demolished Hunt House in Salem. Refer to the section on Fireplaces for a more detailed discussion of the chimney stack.

Roof

The current roofing is thick butted split shakes installed several years ago to replace the previous worn roof of standard sawn shingles (Fig. 1.6). Shakes were used to match the shakes that had been installed on the reconstructed Gould Barn. Based on photographs taken shortly after the restoration was completed Dow installed modern sawn pine or cedar shingles on the roof with a butt thickness of less than 1/2" (Fig. 1.2). Subsequent replacements of the shingles were also standard modern sawn pine or cedar shingles until the recent shake roof was installed.

The original roofing on the house would have been thin hand riven shingles. Most surviving examples of early roof shingles from Essex county are similar in size, thickness and general appearance to modern sawn shingles, typical with butts less than 1/2" thick and a total length of from 16" - 18". The primary difference is that when initially installed the riven shingles had a smooth surface from being shaved with a draw knife, whereas modern shingles have fine circular saw marks. Given the use of oak clapboards, the original roof shingles may also have been oak rather than pine or cedar. The current shakes create a much rougher and thicker texture than either the modern sawn shingles used by Dow or early riven shingles.

No surviving fragments of the original Capon House shingles are known. Sometimes early shingles survive as shims for framing members or are found encapsulated under later additions to the original roof. Several narrow oak shingles of unknown date were recently found by this author under modern roofing on the Judge Holten House in Danvers. A substantial section of 1714 shingles of pine or cedar is preserved in the attic of the First Church in Marblehead.

Dow restored attic gables to the front facade of the John Ward House in Salem in 1910, but did not do so on the Capen House. In the case of the Ward House contemporary newspaper accounts state he found evidence for them, and modern research confirms that evidence. There is no record as to whether he left the Capen roof as a simple gable structure because there was no evidence for front gables, or because there was not enough money and he therefore did not look for evidence in the front plate. Given his experience at the Ward House one would speculate that he probably looked for evidence and found none.

The current roof sheathing does not show any evidence of any early patching to infill gable cuts (Fig. 15.5). Arron Sturgis, the contractor who installed the recent roof shingles in 1998, did not observe any evidence for original gables and felt the sheathing was original because much of it was oak. However, some of the side wall sheathing installed in the 18th century is also oak. It is therefore possible that the removal of original gables in the 18th century included installing new full length oak sheathing instead of patching the former gable openings. Arron did not examine the front plate for gable evidence such as empty rafter and stud mortises. As the front plate cannot be accessed without considerable removal of modern finishes in the attic stairwell, it was not examined as part of this study and is recommended as an item for future investigation.

IS THERE ANY EVIDENCE FOR THE EXISTENCE OF LEAN-TOS, ELLS OR APPENDICES?

The only addition to the house for which there is concrete evidence is the small leanto entry vestibule over the east gable door that is documented in the late 19th century photographs of the house (Fig. 1.4). This was clearly a make-do affair and certainly not something added during the first period.

There is a reference in documents pertaining to the house of a request by Capen to construct a lean-to addition on the west side of the house. We saw no evidence that this was ever built in the area that was opened up on the west side. We did not, however, expose the first floor girt or the corner post at the second story level which is where mortise pockets cut for a leanto frame and roof would show up. If a leanto was constructed by Capen across the area that was opened up on the west facade it was removed by the time the first period windows and oak clapboards were changed. Otherwise the 18th century sheathing boards would not be present in this area.

It is doubtful there were any significant additions to the back. Additions are often remodeled or taken down to construct larger additions, but they are rarely removed completely to return a building to its original footprint (except by 20th century restoration architects!). Some hint of a sizeable addition surviving into the late 19th century such as a protruding chimney would likely show up in the 1880's photos that include the side elevations. The 1913 photos of the rear under construction show well worn wood shingles all across the second story, which indicates that any rear additions would have to have been removed before c. 1850 to not leave a visible trace in the shingles. Evidence of any early additions that were removed before the 1850's would be limited to cuts in remaining early sheathing and/or obsolete mortises in the outer face of the rear framing. Neither the sheathing or the exterior face of rear facade structural members were exposed during this study, so it is not possible to definitively determine that there were no rear additions in the early history of the building.

WHAT WAS THE ORIGINAL FENESTRATION PATTERN?

It is now generally acknowledged that Dow's Capen House windows are very speculative restorations that were installed without clear evidence for their placement, size, or glazing details. However, when the restoration was completed they were widely accepted as reasonably accurate reproductions. Donald Millar states in his 1920 OTNE article that "The windows are the exact size of the original openings and have been restored with casements with rectangular glazing rather than the more common lozenge shape."

William Summer Appleton articulates charitable skepticism about the accuracy of the Dow windows in a March 13, 1938 letter.

"With reference to the lights in the windows, there is in Salem as window like that which Mr. Dow put into the Capen House and from that point of view, it might be said that he was justified in using it. However, he himself told me that he used square lights because the old diamond quarrels had been used in practically every other restoration and there being precedent for the use of square lights, he elected so to restore the Capen House windows. There has been a feeling among some antiquarians that these windows are improbably large for such a house and such individuals feel the arrangement would really have been somewhat different. As to that, I am unable to speak with authority....It seems unlikely that anyone will be able to pass on the accuracy of this restoration for

photographs showing the evidence as found on uncovering the walls were not, I believe, taken. Probably Mr. Dow exhausted all the evidence that there was available and found none except for the installation of windows as wide and high as those put in."

The task put to this study was to examine all the reasonably available evidence to determine more definitively the accuracy of the Dow windows and what the original 17th century fenestration pattern actually was. To this end all the available period photographs were examined, the extant pin locations for the original studs and braces in all the currently exposed girts and plates was measured to delineate the framing, and several exploratory openings were made from the interior and the exterior to expose selected framing members that might reveal further window evidence.

Drawing sheets #3, 4, 5, 17, and 18 should be reviewed in conjunction with this section of the report, as the strictly verbal descriptions of the evidence will be difficult to follow without referring to the framing drawings and photographs. Our somewhat conjectural conclusions regarding the position of the typical original windows is shown on elevation drawings 3.1 for the front facade windows, 4.2 for the west facade, and 5.2 for the east facade. We assume there probably were no windows in the rear facade.

It is obvious from comparing the late 19th century photographs, Appleton's 1913 construction pictures, and photographs taken after the restoration was complete, that Dow placed his new windows precisely between the studs of the 18th/19th century window openings that were present at the start of the work (Fig. 1.1, 1.2, 1.4). The only substantial variation from the overall size of the previous windows is that he raised the sill height of the restoration casements a few inches.

The sash visible in the period photographs are all 6/6 19th century sash, but at least one of the window frames can be seen to have a molded sill characteristic of 18th century windows. That sill coupled with the wrought nails used to install studs added for the replacement windows and related sheathing boards indicate the window changes were initially made sometime in the 18th century (or possibly the very early 19th), and the 6/6 sash are later 19th century replacements of the 18th century sash. Considered with information on the ownership and occupancy of the house, the period from c. 1725 into the 1760's is probably when the windows were changed.

It is worth noting that Dow also placed the restoration casements in the existing 18th century window openings at the John Ward House in Salem. Despite a contemporary newspaper article stating that Dow had found a clear basis for the windows in the building, the only evidence used appears to have been some casements from other buildings in the collection of the Essex Institute.

The 1913 construction photographs showing sections of the sheathing and studs with the previous windows removed were enlarged for any evidence about the original windows. The most helpful photograph was one showing the interior of the southwest parlor corner with the plaster removed (Fig. 11.7). The photo just barely includes the oversized studs framing the west jamb of the westerly front window and the southerly stud of the window in the west wall. The interior face of these studs are currently visible in the parlor as they protrude beyond the face of the plaster. The south wall oversized stud can be seen in the photo to have been notched out for its full depth from its top to the sill height of the 18th century window (Fig. 3.5). The notch therefore appears to relate to the 18th century replacement windows and was likely made because the new window frame was a little too wide for the stud spacing. Dow apparently concluded the notch had nothing to do with the 17th century windows, as he filled it in and his restoration sill is several inches above the bottom of the notch.

In the photos showing the rear facade, the framing around the first floor window openings appears to be relatively modern and may have been installed by Dow to stabilize the rotted condition of the wall framing (Fig. 18.4).

Drawing the original framing proved useful in analyzing the window evidence. The basis for determining the placement of original studs and braces was mapping the location of the wood pins in the girts, plates and posts. Most original first floor studs and braces, except studs that are intercepted by braces, have tenons mortised into the bottom of the girts secured with wood pins or "trunnels". The pins were typically driven from the exterior side of the girt through to the interior face of the girt where they were cut off flush to the face. The braces also have pins where their lower ends are joined to the posts. Where the studs are not full height due to interruption by the braces, they were usually toenailed in place without tenons and pins. Where an original stud has been removed, the pin, or at least the pin hole, has usually remained in place to indicate its location. Studs added after the original construction are usually toenailed to the girts or tenoned into open gains cut in the outer face of the girts and nailed rather than pinned.

The bottoms of the studs were originally joined in a similar manner to the sills. However as all the sills have been replaced these pins are no longer present to locate the studs. The second floor studs were pinned at their bottom ends to the girts at the first floor ceiling level. For the gable and rear wall studs and braces these pins are visible near the top of the first floor girts, whereas the pins for the first floor studs are near the bottom of the girts. The front facade studs are pinned at their bottoms to the overhanging girt which is not readily visible. The studs on the front and rear facades were pinned at their tops to the front and rear plates. These could be located in the parlor chamber and stair hall where the girt is exposed to view, but cannot be seen in the hall chamber and rear kitchen where the girts are covered over with plaster or trim boards. It is not known if the gable wall studs are also pinned at their tops to the overhanging girts, as the interior faces of the girts are not visible.

Comparing the location of the current windows with the original wall framing makes it clear that some of the current windows could not possibly be in the same locations as the originals. On the rear wall all the current first and second floor windows are located in the likely positions of original braces or studs. In the case of the modern kitchen and bathroom the former presence of the braces is less certain because the rear plate and the northeast corner post are completely covered.

The pins for the brace or stud in the position of the rear parlor window are not present because part of the rear girt and the lower chimney post have been replaced. As the mortise and pin hole in the corresponding position in the hall is present in the rear girt, normal symmetry indicates a brace or stud was also present in the parlor. It also was not customary to locate windows in the rear north walls in first period construction.

In the front facade on both floors each of the current windows has one side that extends several inches beyond the pin that was presumably for the original stud (Fig. 3.2, 3.4). The other side of each of these windows aligns properly to an original stud (or stud location). Thus Dow's front windows cannot be the width of the original windows even if they are installed in the correct bays.

Hall and parlor front facade window evidence

The presence of diagonal braces in both front corners of the hall and parlor leaves only the middle section of the front wall for possible original window locations (Fig. 3.1). There are four original pin locations across this section creating 3 bays separated by presumed original studs. The pins in each room are spaced 26" apart for the two side bays and 24" in the center bay. In the parlor the studs forming the extreme right and left ends of these bays appear to be original (Fig. 3.4). They are oversized in both width and depth and project slightly beyond the face of the plaster into the room (the left jamb stud of the west wall parlor window is similar). In the hall Dow has replaced the studs in these locations with new studs matching the oversize dimensions of the parlor studs (Fig. 3.6).

This configuration of studs and pins leaves several possibilities for the arrangement of original windows.

1. Single casement or fixed windows were located in the two side bays similar to Dow's placement, except that the windows were narrower (the available space between the original studs is about 22" compared to the current 26") and probably shorter. The two studs that are now missing would likely have been oversized matching the two remaining parlor window studs. The notches let into the sides of the existing oversized parlor studs for the 18th century frames may have removed any evidence of the original window frames. If the mortises for the missing studs are clearly wider than the norm, it would indicate the studs were like the remaining oversized jamb studs and would be good evidence for this arrangement of the windows. It would be necessary to completely remove a Dow window frame to reveal the mortise in the girt above the frame.
2. There was a three bay window in this location with the girt serving as the header. In this case the two middle bay pins would have secured window mullions rather than studs. This would be unusual, as most evidence for first period three bay windows has included a separate header below the girt. The header received the mullions secured with small mortises and pins to divide the window into bays. Any blocking between the header and girt was simply nailed (although usually the header was placed against the bottom of the girt) making mortises and pins in the girt unnecessary. The one well-documented exception where there is no header is the Fairbanks House. The only way to determine whether this was also the case in the Parson Capen House would be to remove at least one of Dow's window frames to examine the underside of the girt and the former mortise for the middle bay. If the mortise was substantially undersized compared to the usual studs it would suggest it housed a mullion rather than a stud. Conversely, a mortise for an oversized stud would support the window configuration #1 above, while one in between the extremes would be inconclusive. The presence of grooves to house a fixed leaded sash, or symmetrically placed 1/2" diameter holes to house vertical wood stiffening rods would also be important evidence for this configuration.
3. A single narrow window in the center bay. This seems unlikely as it would leave no obvious logic for the oversized studs at the end bays. One could presume they were for added support of the double summer beams, but that is not logical given a similar oversized stud in the end gable of the parlor, and a the pair of similar oversized studs surviving behind the plaster in the hall chamber east wall.
4. An asymmetrical placement of a two bay window using one side and the center bay. This seems unlikely for the same reason as #3 above.

The pier between the two hall windows was opened up from the exterior to examine the framing for this condition. The tops of the two existing studs receiving the window jambs were secured to the front girt in open diagonal gains and nailed with wrought nails. The sheathing boards that were removed were fastened with wrought nails to these studs, and bore pressure marks from the edge of the casings of the previous windows. The 1913 photographs show this portion of the wall still covered with shingles although the previous window frames had been removed. From this combination of evidence it is clear that the existing two studs and the sheathing between them were installed as changes in the 18th century to install wider windows than the original stud locations would allow, and had not been disturbed by Dow beyond the removal of the old window frame. The two studs were not reused original ones, as there were no holes in the exposed tenons for the former pins. There were no marks in the underside of the girt between these two studs to indicate a former window sash or related trim in this location.

Hall Chamber Front window evidence

Small openings were cut in the plaster of the hall chamber below the front windows to examine the existing studs and any evidence of the original ones. The east and south walls of this room had been furred out over the face of the roof plate and replastered to conceal the framing members in the second half of the 19th century to make the room look more modern. The original studs framing the east side of the east window and the west side of the west window remained in place, while the studs forming the pier between the windows were replacements positioned to frame the wider 18th century replacement windows similar to the pier studs in the hall below. The two remaining original studs were oversized and like the surviving parlor studs they had originally projected slightly beyond the plaster finish into the room (Fig. 3.3). A nailer to receive the lath of the previous plaster wall was still in place, and the face of the stud had fragments of early whitewash finish on it. Also like the parlor studs, long notches had been cut into their sides to make more room for the 18th century window frames.

The exact position of the easterly original pier stud was evident from its mortise remaining in the overhanging girt (Fig. 3.7). The original mortise had been lengthened in the westerly direction by about 4"-5" to receive the tenon of the replacement pier stud. Remaining fragments of the cut away end of the mortise indicate it was about 4" wide. The clearly cut end of the original flooring at this location likely marks the inner face of the original stud. The combined evidence of the mortise and the flooring indicate the pier stud was about 4" wide by 4" deep and matched the other surviving oversized studs. The dimension between the pier stud and westerly window stud is 22". The mortise for the westerly pier stud in the overhanging girt had been eliminated by severe rot in the overhanging girt (Fig. 17.1).

The combined evidence of the two remaining oversized studs and the mortise for the easterly pier stud is extremely important. This evidence verifies that the original window bays were marked by oversize studs that extended slightly beyond the finish plaster on both sides of each bay. It suggests Dow was correctly following the remaining evidence when he exposed the inner face of his replacement hall studs. It also strongly supports configuration #1 above for the front windows in all four rooms.

Parlor Chamber Front Window evidence

A small opening cut in the front wall plaster showed the plaster to be on circular sawn lath likely dating to the second half of the 19th century. The lath was directly on the face of the 3" deep studs. Although the window studs were not observed directly, the remaining original window studs do not project through the plaster and were probably cut back to align with the others. The pin pattern visible in the plate confirms the original stud locations duplicates the parlor below.

Gable wall window evidence

The location of original studs in both the east and west end walls suggests there was a double casement window on the first floor and one or more single casements on the second floor (Fig. 4.2). Evidence from exposing several studs in the east gable wall of the hall chamber suggests that a single casement was originally located just to the north of the exterior wall bracket rather than the location of the current window to the south of the bracket (Fig. 5.2).

The spacing pattern for the studs on both floors is around 25" in center. At both the east and west end walls of the first floor there is no pin evidence for an original central stud, which leaves a double bay about 45" wide. There is, however, clear pin evidence in the top of the first floor end girts that there was an original stud directly above the middle of the first floor bay on the second floor. On the west end the existing original central bracket is presumably let into a gain in this stud.

Both the east (Fig. 5.5) and west (Fig. 4.1) end walls were opened up from the exterior to expose the upper portion of the northerly original stud of the 45" wide bay. Adjacent studs were also exposed. The evidence provided by the west wall was the most conclusive, but there were some similarities in both walls.

At both walls the existing stud near the center of the 45" bay was clearly added in the 18th century. Both were fastened with wrought nails into a gain in the face of the girt. The east wall gain had a slanted cut (Fig. 5.3), while the west wall one was rectangular. The east wall stud functioned as the jamb for the added door, while the west one framed the 18th century window. The northerly stud in both walls was oversize, but had been cut down to be hidden by later plaster finishes.

Evidence revealed in the west wall first floor: (Sheet #4)

- The northerly stud had a large (3/16") diameter hole with adjacent pressure marks about 10" below the bottom of the girt (Fig. 4.3). This may have been from a sash pintle, or possibly a spike to fasten a window header. While this seems low for a window header, the bottom of the end girt is 6" higher than the bottom of the front plate in the parlor.
- There is a row of three smaller nail holes 4" above the large hole that also were present before the sheathing was added. These do not seem to relate to the original clapboards, but could have been from nailing the projecting horn of a window header. Their height would align the header with windows under the front plate.
- The other nail holes in the stud (other than the single sheathing nail) are from the original clapboards.
- The northerly stud was 4" wide which is a little wider than other studs in the wall. Its inner face had probably been cut back to allow latter plaster lath to pass over it, but the current (1913) plaster prevented confirmation of this.
- There were no marks on the window side (i.e., south face) of the north stud that could be related to a former window.
- Finding another pintle mark lower down on the stud would confirm the interpretation that this was a window stud for an operable casement, and would also provide the approximate height of the sash. The absence of another mark lower down would cast doubt on the interpretation that the mark is from a pintle. Removal of the next 1 - 2 lower sheathing boards was not done during the investigation due to time constraints for closing up the wall, but is strongly recommended as future work. Most of the clapboards that would require removal are modern replacements.
- The south side of the stud and the inner side of the sheathing board between the north stud and the center added stud were heavily stained with clay residue (Fig. 4.5). This suggests that when the original window was removed the resulting wall cavity was filled with clay nogging to match the other original wall cavities. The nogging would have been installed using the newly added sheathing boards as a backing form, thus only staining the board in this bay. Another explanation for the clay stains would be that a major leak wet the clay and resulted in the stains.
- The nail evidence in the added center stud confirms that it was not added until the original clapboards were removed and the sheathing installed (Fig. 4.4, 4.5).

Evidence revealed in the east wall first floor:

- The first floor east wall opening was not done as rigorously in terms of tracking the nail holes in the sheathing and the studs, and the evidence was more ambiguous.
- There was an area of heavy erosion to the stud about 6" below the girt which could be interpreted as being caused by leak at a window head (Fig. 5.6).
- There were two slightly oversized and very oxidized nail holes about 8" below the bottom of the girt. Neither was looked exactly like the 3/16" diameter hole on the west gable (Fig. 5.6).
- The mortise receiving the stud was 4" wide, but the stud was only 3". The studs showed no signs of having been cut down in the dimension of the mortise, but its tenon was properly pinned in place and its interior (i.e., facing into the hall) side looked very much like it had been cut back to its current 3" depth (Fig. 5.7).

Evidence revealed in the east wall second floor:

At the second floor of the east side of the hall chamber several holes were cut in the plaster just above the baseboard. These revealed that the stud receiving the restored bracket was indeed an oversized stud 4" deep that had originally projected into the room (Fig. 5.4). Surprisingly, the next stud to the north of the bracket stud was also oversized and had a piece of reused ogee molding fastened to its upper end with wrought nails being for use as a nailing strip for plaster lath (Fig. 5.1). There is currently no window in the bay between these two oversize studs, but this appears to have been the original window location in this wall. The presence of a reused molding as a nailing strip for 18th century plaster (the lath nails in it are wrought) suggests the upper part of the stud did not receive a nailer for plaster until the original window was removed. The space between these two studs measured 22".

The current window is located between two added studs in the bay just south of the bracket stud, with an original stud having been removed to install it. The location of the original stud is indicated by a pin in the girt visible in the hall below, but its mortise has been destroyed by rot. Therefore an original window could not have been located in this bay.

Photographs and the elevation drawing documenting this rather complex second floor east gable stud evidence are on Sheet #5.

TO WHAT EXTENT DOES THE INTERIOR WOODWORK AND DECORATION REPRESENT THE FIRST PERIOD VERSUS THE 1913 RESTORATION ?

Visible interior material that actually dates to the first period is limited primarily to the exposed frame (corner and chimney posts, girts, plates summer beams, ceiling joists, and a few studs), fireplace lintels and coverboards, the chimney stack, portions of the staircase, and the wood ceiling boards exposed throughout the first floor and in the second floor stair hall.

Visible plaster walls and ceilings date to the 1913 restoration in the parlor, and to c. 1840's-86 throughout the second floor and the finished attic rooms. The decorative wood sheathing in the hall, parlor, and stair hall dates to the 1913 restoration and is not based on any first period historical precedent found in the house (Fig. 7.2, 7.4). The exposed, unfinished oak studs and rear summer post in the hall and the two rear painted summer posts in the parlor also date to 1913. They are based on original exposed first period studs remaining in the parlor and the two exposed posts in the rear parlor chamber above the summer beams. All floors date to the 1913 restoration or possibly the second half of the 19th century, except in the hall where the flooring is much older but probably not original. All window sash, frames, and doors also date the 1913 restoration.

The original walls had a filling of brick and clay nogging in the 3" wide wall cavity between the studs. Most of the second floor nogging was likely removed in conjunction the c. 1840's-1886 replastering if not earlier, but the first floor nogging might have survived until 1913. Fragments of the original nogging were found in the attic eaves and on top of the overhanging plate in the hall chamber wall.

Based on the now concealed original clay plaster and riven pine wood lath found on the underside of the parlor chamber ceiling boards (i.e., attic floorboards) it is assumed that the original plaster used on the walls of most rooms was also clay rather than lime based (Fig. 14.2, 14.3). No concrete evidence was found to determine if all the rooms had finished plaster walls as opposed to areas of exposed brick nogging as found in the Boardman House in Saugus, or board sheathing. We suspect, however, that most were plastered except the areas of fireplace walls that still had plain wood sheathing of unknown date at the start of the 1913 work. There was clear evidence in some of the rooms that there had been one or two previous generations of wall plaster before the existing ones were installed.

Dow's use of board sheathing on all the walls of the hall was apparently based on the supposition that board walls were cheaper and more utilitarian than plaster and therefore likely to be used in the hall but not the parlor, as well as the survival of board sheathing in the halls of other first period houses. The basis for his choice of feather edged sheathing as opposed to crease molded sheathing is not known other than that he had used identical sheathing in the Ward House restoration two years earlier. Apparently he had not yet come to distinguish between the standard feather edged sheathing used in the 18th century and the various profiles of crease molded sheathing used in the first period. The hall was clearly finished with post-first period plaster (exclusive of the board partitions that divided the space into three rooms) at the time Dow started his restoration, but a considerable amount of additional 1913 sheathing would have to be removed to uncover any pattern of surviving evidence to determine pre-19th century exterior wall finishes.

ARE THE HEARTHES AND CHIMNEY STACKS COMPLETE RESTORATIONS? OR, ARE THEY REPAIRED AND RE-WORKED?

The chimney stacks are largely original up to the roofline, but were lined in 1972 with an interior parging of cement stucco applied over a wire mesh fastened to the brick from the smokeselves up to the top of the second floor (Fig. 12.6). In the attic the outside of the stack was parged with the same cement stucco except the lower part facing the attic stair hall, which was left alone. They consist of early brick laid up in a clay mortar, including the whitewashed brick visible in the stair hall (Fig. 13.1, 13.4). The stack above the roofline was completely rebuilt by Dow in 1913 copying from a photograph the detailing of the chimney on the Hunt House in Salem that was torn down in 1863.

The fireboxes of both the hall and parlor have been repaired and reworked rather than completely reconstructed. The south jambs and southerly inside curved corners of both are largely original including some areas that still retain the original clay mortar. The northerly jambs and inside corners of both are largely reconstructed, including the back oven of the hall fireplace. The back walls with inset panels are best characterized as repaired with some sections retaining original bricks and mortar and others rebuilt but retaining the original detailing that was found when they were opened up in 1913. Based on photographs and notes taken by Appleton just after the fireplaces had been opened up back to the the original fireboxes, the reworked and reconstructed areas have been done with reasonable accuracy (see Sheets #9 and 12). However, the 1972 application of grey cement parging to the inset panels and the sloped tops of the adjacent piers is a questionable treatment.

The wood lug poles in the chimney throats are restorations, but the wood lintels (i.e., mantle trees) are original. The coverboard facing the wood lintels appears to be original or very early in both fireplaces. The brick above the mantles forming a shallow cove to the ceiling is original, but its covering of thin whitewashed plaster is a restoration to a logical period typical treatment.

The brick hearths (i.e., the floor of the fireplaces) are entirely rebuilt with the brick set in cement mortar. Their extent seems to conform to the hearth areas found when the fireplaces were opened up in 1913. They should have been laid with tight joints without mortar to be historically accurate.

Dow used grey cement mortar for all his masonry repair work, as have most repairs done since. Although it makes it easy to track his rebuilding, it is unsightly in relation to the original clay mortar, and also has the potential to damage the brick over time.

THE SECOND FLOOR CHAMBERS HAVE UNDERGONE CONSIDERABLE ALTERATIONS, MOST PROBABLY BY DOW IN ORDER TO CREATE A CARETAKER'S APARTMENT. IS THERE SUFFICIENT IMPORTANT HISTORICAL FABRIC REMAINING TO WARRANT REVERTING EITHER OF THESE CHAMBERS TO THEIR 17TH C. APPEARANCE?

It is clear from the 1972 Jack Pierce memo regarding flue repairs that the original fireboxes remain in place behind the current plaster. The memo also states he did not see any evidence for the surrounding wood trim or other finishes. While it is not clear what he considered evidence (i.e., whole pieces of a mantel vs. paint shadows and nailers let into the masonry), whatever evidence might still be found by removing the plaster is bound to be subtle and incomplete. Any restoration of the fireplace wall would be largely speculative and essentially a stage set based on period typical details more than concrete evidence.

In other regards, restoration of the parlor chamber would be much like the parlor below with the actual first period posts, girts, and summer beams, and floor joists intact. The original floor remains in place under the current yellow pine floor, but its surface condition is unknown. The remaining

4" deep window studs have all been cut back to 3", but could be pieced out to project beyond the plaster as they do in the parlor. Treatment of the original clay plaster ceiling between the ceiling joists would pose a preservation problem. The plaster is very fragile and much of it will be found to be loose or fallen off the lath. Most of it will have to be destroyed in order to restore the appearance of the ceiling.

We do not see much to be gained by restoring this room to the first period with yet another speculative recreation of a period typical fireplace wall. Currently it functions reasonably well as a gallery for post first period furnishings and objects. Other than Dow's windows it now represents how many first period rooms have evolved through various changes into early twentieth century residential use. From an academic point of view the most interesting first period aspect of the room is the clay plaster ceiling. A section of this along with some white washed ceiling joists and summer beam could easily be revealed as a view panel if desired without harming the room's function as a gallery.

The hall chamber poses similar problems in regard to the speculative restoration of the fireplace wall, but is more fully intact in regard to the original oversize window studs and not having clay plaster hanging in tatters from the ceiling. With its good evidence of the progression of framing changes in association with the early window changes and early finishes still present on the concealed frame, this room has more potential as a building archeology exhibit than as speculative total restoration. This would entail opening up broad sections of the south and east walls along with a portion of the ceiling to reveal the framing along with some graphic panels to explain what is being shown. The remainder of the room could be used to display additional graphic material about the development of the house, its occupants, and the role of Dow in the historic preservation movement. In other words, it would function as a visitor orientation space to provide a context for understanding the restored rooms on the first floor along with the various exterior features of the house.

CAN THE TIMBER FRAME BE PICTORIALLY REPRESENTED, AND HOW DOES IT RELATE TO OTHER KNOWN EXAMPLES IN ESSEX COUNTY?

The layout of the original timber frame in the walls has been determined by a combination of mapping the locations of original pins for joints in the girts, plates, and posts, examining the 1913 photos, removing finishes in selected locations to reveal the framing, and getting into relatively inaccessible portions of the attic to measure the detailing of the overhanging gable end girts. From this information we have prepared a three dimensional CAD drawing of the frame which is shown on Sheets #17 and #18. The drawing should be regarded as schematic rather than precise to the inch for each individual frame component, especially as regards the taper and shoulders of the various posts. There were a few places where the stud pattern could not be fully determined from the pins, and it was also not possible to verify each brace. These problem areas were mostly on the rear facade where repairs to the principal framing members or coverboards and lowered ceilings made it impossible to locate the pins. The existing pins that were located are shown on the drawings as red dots. Wherever these are missing it should be assumed that the stud or brace shown has been conjecturally located. The drawings are printed in perspective and are not to scale. However, they can also be printed as scaled elevations.

Regarding the relationship of the Parson Capen House frame to other first period Essex County examples, we have made comments on the various photo sheets where a specific comparison is warranted.

INVENTORY OF INTERIOR FABRIC

The following are a room by room notes regarding the finishes and historic fabric origins within the house. Refer to the photo-drawings for each of the major spaces for illustrations and further text in conjunction with the notes below.

Parlor (Sheets 11 and 12)

Floor: Wide pine boards installed in 1913 by Dow over pine subfloor of same date that includes some reused sheathing from removed walls with wallpaper still on it. Two joist bays at the west gable of first period clay and straw insulation supported by unused original oak clapboards carried by 1" diameter "rungs" between joists survives below the flooring in the cellar.

Wall finishes – south, west, and north: Plaster installed in 1913 over new wood lath and new supplemental studs added to the early ones remaining in the wall. The north wall was entirely reframed. Based on the 1913 photos the plaster removed by Dow was likely 18th century, as riven lath and plaster are clearly visible in the photos.

Wall framing – south, west, and north: Exposed sills date to 1913, presumably copying evidence of the originals, but there is no documentation. The 1913 photo of the interior southwest corner was taken after the new sills were installed (Fig. 11.7). Girts and corner posts are all original except for the easterly 6' of the north girt which is an early (pre-Dow) repair, and ending out the bottoms of the corner posts by Dow (Fig. 11.1). The NW corner post has been further ended out within the last 50 years. The two exposed studs on the south wall are original with the notch cut in for the later windows having been filled in by Dow. The one exposed stud on the west wall appears original except its bottom was ended out by Dow. The two posts under the summer beams on the rear wall are 1" thick cosmetic restorations by Dow based on original pin holes in the girt and surviving original posts in the parlor chamber directly above (Fig. 11.5). The plastered brick nogging on the front and rear girts is largely restored by Dow as the 1913 photo shows loose bricks sitting on the girt (Fig. 11.7).

Wall finishes – east (chimney): The board sheathing and doors all date to 1913. The sheathing to the right of the fireplace replaces unmolded vertical board sheathing removed by Dow that was of early but unknown date. The sheathing on the left replaces plaster over 18th or 19th century brick (Fig. 12.1). The placement of board sheathing on this wall is a logical period typical treatment, but the feather edge profile of the boarding is not. The chimney girt is original.

Fireplace: The form and some of the brick work is original, with substantial rebuilding and the hearth dating to 1913. See previous section on the chimney and hearths for detail. The wood coverboard is early or original. The coved section above the coverboard appears to be the original brick with a 1913 plaster finish. Whether the brick jambs were originally exposed as now, or partially covered with wood sheathing as in the 1913 photo is not known.

Ceiling: Summer beams, joists, and wood ceiling are original except for some minor 1913 repairs over the hearth. Nail hole evidence of the plaster ceiling Dow removed in 1913 is now largely filled in with paint. All ceiling members retain the historic paint build ups that they were present in 1913 under the current white paint initially installed by Dow to imitate period whitewash treatment.

Windows: Sash and frames all 1913 installed in the openings used by the previous 18th/19th century windows.

Front closet: Rear wall and ceiling is lime-based plaster over split oak lath that are hastened with

wrought nails (Fig. 11.6). The plaster probably dates to the 18th century rather than the first period, as clay plaster was used for the original construction based on the original ceiling of the parlor chamber. The oak lath may be reused oak clapboards, although we did not see any concrete evidence for this such as obsolete nail holes or remnants of a tapered end joints. If they are, the installation would date to the removal of the original clapboards to change the windows and install board sheathing.

Rear chimney bay closet: Except for the original chimney posts and the rear girt, all the finishes and framing date to 1913 or later (Fig. 12.7). The ceiling boards are 1964 plywood over new joists. The wall studs are Dow replacements with mortises for the originals visible in the underside of the rear girt. The brick masonry is all 1913 work done to restore the bake oven in the hall fireplace and restore the back corner of the parlor fireplace following the removal of the later bake oven.

Hall (Sheets 7 # 7, 8, 9, and 10)

Floor: Wide pine boards with areas of very heavy wear, probably early 19th century or older, except the northerly 3'-4' which were replaced by Dow. Based on the absence of many wrought nails the floor is likely not original, but the heavy wear may have worn away the heads or caused re-nailing. The boards are only half the width of the room long with a straight joint line directly under the summer beam and aligned next to a former partition line. There are fragments of several layers of old yellow ochre paint on them. Paint shadows and wear patterns clearly define the locations of former partitions of unknown age that were removed by Dow (sheet #10). There is evidence that at least the north-south partition may date back to the 18th century. The spaces on the east side of the partition may initially have served as pantry and/or buttery, but there is no concrete evidence for their usage. The sub-flooring is old vertically sawn wide pine boards that extend the full width of the current room (Fig. 16.7). There is a trap door of unknown age leading to the hall cellar adjacent to the south wall.

Wall finishes – south, east, and north: 1913 horizontal feather edged board sheathing. There is no documented evidence for this treatment in the hall, and the joint profile used is period typical to the 18th century rather than first period work (Fig. 17.2, 7.4). The wide casings at the northeast and northwest corners date to 1913 and conceal heating and plumbing pipes.

Wall framing – south, east, and north: Exposed sills date to 1913, presumably copying evidence of the originals, but there is no documentation. The 1913 photo of the interior southwest corner was taken after the new sills were installed (Fig. 7.1). Girts and corner posts are all original except some ending out the bottoms of the corner posts by Dow. The post under the summer beam is a cosmetic restoration by Dow probably based on the similar ones in the parlor and parlor chamber (Fig. 8.2, 8.3). There are currently two pin holes in the girt above it, but only one is obviously old making this a questionable feature. The two exposed studs on the south wall (Fig. 8.1) and the two on the east wall (Fig. 8.4) are restorations by Dow based on the originals surviving in the parlor. The existing studs in these locations appear to have been cut back in the 18th or 19th century from a 4" depth to 3" to enable the plaster to fully conceal them, and Dow refaced them to project beyond the board sheathing wall finish (Fig. 5.7). The plastered brick nogging on the front and rear girts is largely restored by Dow with a hard rough plaster finish, but a 2' section with original clay plaster remains next to the summer beam on the south wall (Fig. 8.1). The rear (north) wall was reframed with conventional modern studs in 1913 (Fig. 8.2).

Wall finishes – west (chimney): The board sheathing and door date to 1913. The sheathing to the left of the fireplace replaces unmolded vertical board sheathing removed by Dow that was of early but unknown date (Fig. 7.1, 7.6). The placement of board sheathing on this wall is a logical period typical treatment, but the feather edge profile of the boarding is not. The chimney girt is original.

Fireplace: The form and some of the brick work is original, with substantial rebuilding including the oven and the hearth dating to 1913 (Sheet #9). See section on the chimney and hearths for detail. The wood coverboard is early if not original. The coved section above the coverboard appears to be the original brick with a 1913 plaster finish. Whether the brick jambs were originally exposed as now, or partially covered with wood sheathing is not known.

Ceiling: Summer beam, joists, and wood ceiling are original except for some minor 1913 repairs over the hearth. There is clear nail hole evidence of the 19th century plaster ceiling Dow removed in 1913 (Fig. 10.2). All ceiling members along with the corner posts and girts were stripped of paint in 1913. However fragments of early whitewash remain on obscure portions of the summer beam (the top bevel facing the ceiling) and one joist (Fig. 7.5), and some 19th century paint buildup remains on the southeast corner post (Fig. 7.2).

Windows: Sash and frames all 1913 installed in the openings used by the previous 18th/19th century windows.

East entry door: Installed in 1913 in the location of a previous 18th/19th century door (Fig. 8.4). Its design is double boarded based on period typical utilitarian 18th/19th century door construction. No information exists on the door it replaced.

Stair hall/entry (Sheet #13)

Floor: Wide pine boards installed in 1913 over new framing.

Wall finishes: 1913 vertical feather edged board sheathing on east and west walls shared with the hall and parlor, and as finish for the staircase below the stair rail. The wide casings at the southwest corner dates to 1913 and conceals heating pipes and the west chimney post, the remainder of the south wall being 1913 plaster. The north wall of the staircase is the brick of the chimney mass coated with white paint along with the exposed wood framework that carries the attic portion of the staircase (Fig. 13.1, 13.4). Both the brick and the wood framing are first period material that have always been exposed to view. The upper right hand corner of the wood framing is covered with some rough wood boards that do not appear in the 1913 photograph of the stair and were probably installed by Dow or later to conceal the wiring for the light fixture currently installed on it.

East entry door: 1913 double boarded door copying the front door and hardware from the Sheldon House in Deerfield.

Wall framing – south, east, and north: The studs for the doors to the hall and parlor are let into old gains in the chimney girts. The gains are much wider than the studs, which are probably old material reused by Dow in this new context (Fig. 13.2). Although for the most part studs installed by Dow are obviously clearly different from the originals, there are a few other examples where he reused old wood. The exposed front girt is original, but has a large dutchman over the door that makes it impossible to determine the exact location of the original door and studs in this wall. The existing studs cannot be conclusively dated from the 1913 photographs. The original chimney posts are shared with the hall and parlor.

Ceiling: Joists, and wood ceiling are original, but were stripped of paint in 1913 (chimney girts are also stripped, while the front girt remains painted). The joists ends are finished with angled cuts set in matching beveled gains in the chimney girts rather than the usual butt cog joints (Fig. 13.3). This is an unusual joint configuration, but there is no evidence of other mortises in the girts, which indicates this is the original joint detail.

Upper Stair hall/entry

Floor: Narrow oak strip flooring installed in 1913 or later over the original pine floor boards with substantial shimming to make the new floor somewhat level.

Wall finishes and doors: 1913 vertical feather edged board sheathing on east and west walls, and partition and doors for the staircase on the north side; horizontal sheathing on south wall. details of all sheathing match first floor. 1913 sheathing boards on the west wall cover much older rough board vertical sheathing that backs up plaster wall in parlor chamber (Fig. 13.8). The date and origin of the rough sheathing cannot be determined with certainty without considerable more destructive investigation. The openings to the parlor chamber and hall chamber are trimmed with plain board jambs dating to 1913, and currently are not furnished with doors. The west end of the staircase is finished with rough pine boards that are of unknown age but much older than 1913.

Wall framing – south, east, and west: The framing for the door openings is concealed and unknown. The exposed front roof plate and chimney girts are original and currently painted. The plate has an original bladed scarf joint (Fig. 13.7). The original chimney posts are shared with the hall and parlor. The remnants of early whitewash finish on the west chimney post exposed when the 1913 sheathing board was removed confirm that rather crudely shaped shoulder of the post is an original detail shared with the other three posts on the south wall (Fig. 13.8, 14.5). There is a small triangular shaped spline at the base of both posts that is let into mortises in the posts and the top of the chimney girts (Fig. 13.6). This is an unusual detail that was apparently intended to stiffen the joint of the posts to the girts. Pins in the roof plate demonstrate that the original studs are regularly spaced across the width of the stair hall (Fig. 13.7).

Window: Sash and frame 1913 installed in the opening used by the previous 18th/19th century window. Pins for original studs indicate a stud occupied the position of the window (Fig. 113.7).

Ceiling: Joists, and wood ceiling are original, but were stripped of paint in 1913. The joists ends are finished with angled cuts set in matching beveled gains like the first floor stair hall.

Parlor Chamber (Sheet 14)

Floor: Narrow yellow pine strip flooring installed in 1913 or possibly late 19th century over the original pine floor boards with substantial shimming to make the new floor somewhat level.

Wall finishes – north and south: C. 1840's - 1886 plaster and over beaded wood baseboard up to the underside of the front and rear plates. Space above the front and rear plates covered with a beaded wood coverboard contemporary with the current plaster, but was originally filled with brick nogging. Nogging is missing at the north wall, but was not checked at the south side. Plaster is on circular sawn wood lath nailed directly to 3" deep studs. Oxidation on back side of lath and vertically sawn baseboard is darker than on the 1913 lath and studs in the parlor below (based on small observation hole cut in south wall).

Wall finishes – east (chimney wall): Similar to the south except there is no coverboard above the chimney girt (it extends to the attic floor above). Based on the lath barely visible behind the old sheathing board exposed in the stair hall, some of the plaster on this wall may date to the 18th or early 19th century. Plaster in central section of wall was replaced in conjunction with 1972 repairs to the chimney flues.

Wall finishes – west: Plaster redone in the 1970's to add insulation to the wall. The wall plane was brought out another 1'-2" into the room in conjunction with this. It is not known if the earlier

plaster remains underneath or what sort of insulation was actually installed. Otherwise similar to south wall except plaster rises to the ceiling and the end girt is not exposed.

Wall framing – south, east, and north: Wall cavities are all 3" deep with any projecting studs having been cut back to 3" to cover them with plaster in the 18/19th centuries. Girts and corner posts are all original. The two posts above the parlor summer beams on the rear wall are original based on pin holes in the girt and drilling to confirm their 4" thickness (Fig. 14.4, 14.7). One wonders if the frame was initially laid out for double summers matching the parlor below, and then changed during construction to a single summer beam.

Wall framing – east (chimney): Not explored.

Fireplace: Original rectangular firebox having straight sides parged with original clay and covered by 1972 brick and plaster, based on a Jack Pierce memo describing 1972 flue repairs. The memo mistakenly assumes this was a rough opening for a finished fireplace with angled sides, as straight sides parged with clay would be the normal configuration for a first period chamber fireplace. The memo states there was no visible evidence for finish trim associated with the fireplace.

Ceiling: Circular sawn lath and plaster ceiling installed on the underside of the joists c. 1840's-1890 with original summer beam projecting through the plaster without casings. The original first period ceiling treatment consisting of exposed whitewashed joists and summer beam with riven pine lath and clay plaster installed directly on the wood ceiling boards (i.e. attic floor boards) remains largely intact under the current ceiling (Fig. 14.2, 14.3, 14.6). This is an unusual treatment suggesting the parlor chamber was highly important to the original owners. It also is evidence that clay rather than lime based plaster was the material used for original plaster surfaces in the house. It is not known if the current ceiling replaced an 18th century ceiling in the same plane or if the full framing was exposed well into the 19th century. The outline of former 4" wide partitions that divided the current space into three rooms is evident as patching and paint lines on the ceiling (Fig. 14.7, 14.9). These partitions are believed to have been removed in 1913, as there is no record of removing them later.

Paint: Exposed structural members including summer beam are painted and retain substantial buildup of historical paint layers under the current layer. Paint lines marking the location of the former partitions are very evident in both the summer beam and the rear plate (Fig. 14.1).

Doors and windows: Simple board and batten door to chimney bay kitchen is from 1913 or later. Windows are all Dow restorations in 18/19th century openings. The original first period window in the east gable was in the stud bay just north of the existing window location, based on evidence from the hall chamber.

Hall Chamber

Floor: Narrow yellow pine strip flooring installed in 1913 or possibly late 19th century over the original pine floor boards with substantial shimming to make the new floor somewhat level.

Wall finishes – north, south, and east: C. 1840's - 1890 plaster and over plain wood baseboard up to the plaster ceiling. Oxidation on back side of lath and vertically sawn furring strips is darker than on the 1913 lath and studs in the parlor. On the east and south walls the plaster is furred out to create a deep wall cavity by nailing the furring to the interior face of the roof plate, thus hiding all framing timbers except the shoulders of the posts (Fig. 3.3). The north wall is a partition dividing off the rear area as separate rooms and is likely similar to the partitions removed by Dow in the parlor chamber.

Wall finishes – west (chimney wall): Similar to the south except that it is probably furred out to the extent needed to conceal the chimney girt. Plaster in central section of wall was replaced in conjunction with 1972 repairs to the chimney flues.

Display Cabinets and Closet: The glass fronted cabinets were added in 1974. the closet at the southeast corner was added in 1913, or possibly later as a convenience for the caretaker.

Wall framing – south, and east: Wall cavities are about 7 1/2" deep at south wall (Fig. 3.3) and 5" at east wall (Fig. 5.4) with two 4" deep window studs remaining fully intact within the cavity in each wall along with the normal 3" deep studs. Girts, plates and corner posts are all original with fragments of their whitewash finishes still on them. From nailing and furring strips on the studs there appears to have been two previous plaster walls in this space. the first was with a 3" cavity and the window studs exposed in the room with a whitewash finish. The second was with a 4" deep cavity with the plaster covering the window studs. The original mortise for one of the front original window studs removed in the 18th century is still intact and provides the best evidence found for the original front wall window placement (Fig. 3.7). The east wall studs also provide major evidence for the upper gable wall window placement.

Wall framing – west (chimney) and north (partition): Not explored.

Fireplace: Original rectangular firebox having straight sides parged with original clay and covered by 1972 brick and plaster, based on a Jack Pierce memo describing 1972 flue repairs. The memo mistakenly assumes this was a rough opening for a finished fireplace with angled sides, as straight sides parged with clay would be the normal configuration for a first period chamber fireplace. The memo states there was no visible evidence for finish trim associated with the fireplace. It does not distinguish between the hall chamber and parlor chamber fireboxes.

Ceiling: Circular sawn lath and plaster ceiling installed about 4" below the underside of the joists c. 1840's-1886 with original summer beam projecting about 3" through the plaster without casings (Fig. 15.1, 15.2). There is a large 2' long Dutchman repair to the side of the summer beam at the south wall. The original first period ceiling treatment consisting of exposed whitewashed joists, summer beam, and wood ceiling boards (i.e. attic floor boards) remains largely intact under the current ceiling. In contrast to the parlor chamber this is a normal first period ceiling treatment.

Paint: Exposed structural members including the summer beam are painted and retain substantial buildup of historical paint layers under the current layer. The east wall within the closet retains wallpaper covered with plain paper and white paint. This was soaked apart and found to be a large ivy pattern on a white ground. It is probably a paper installed when the room was part of a caretaker's apartment from c. 1913-1972.

Doors and windows: Simple board and batten door are from 1913 or later to rear service rooms. Windows are all Dow restorations in 18/19th century openings. The original first period window in the east gable was in the stud bay just north of the existing window location.

Rear Kitchen and bathroom (chimney bay and rear of original parlor chamber)

Floor: linoleum c. 1964. Substrate is plywood in chimney bay, and probably also in the hall chamber section but not confirmed.

Wall finishes – north, south, east, and west: Probably C. 1840's - 1886 plaster and over plain wood base-board up to the plaster ceiling similar to hall chamber, but various sections were likely redone in 1913 and 1964 to renovate these spaces for utilitarian service usage. The east wall matches the east

wall of the hall chamber. The north wall appears to only have a 3" cavity and rises to the underside of the rear plate. The east and west chimney posts are protrude well beyond the plaster surface and are not cased. The rear plate in the chimney bay is faced with a plain wood coverboard that rises through the ceiling and is probably 19th century. in the parlor chamber section it boxed in with plaster. The south wall is the partition dividing off the rear area from the parlor chamber, and in the chimney bay is plaster over the brick chimney. there are also several board partitions forming the bathroom. These date to the 1913 renovation. A north/south partition at the east chimney post was removed in the renovation of 1964. Wall cabinets and fixtures generally date to the 1964 renovation.

Wall framing – North, and east: East wall cavity is 5" and presumably a continuation of the parlor chamber wall. It was partially examined from the attic eaves above. North cavity is probably 3" deep but was not explored. The exposed posts have some fragments of earlier paint on them. The NE corner post is concealed behind a plumbing vent chase. The rear plate has a scarf joint in the chimney bay, but its pins are concealed by the coverboard.

Wall framing – west and south (partition/chimney): Not explored.

Ceiling: Circular sawn lath and plaster ceiling installed about 4" below the underside of the joists c. 1840's-1886 with original summer beam projecting about 2" through the plaster without casings. The original first period ceiling treatment consisting of exposed whitewashed joists, summer beam, and wood ceiling boards (i.e. attic floor boards) remains largely intact under the current ceiling in the parlor chamber section. In the chimney bay section the ceiling framing was never painted.

Paint: Exposed structural members and casings including the summer beam are painted although the remnants of earlier paint are somewhat fragmented.

Doors and windows: Simple board and batten doors are form 1913 or later. Windows are all Dow restorations in 18/19th century openings.

Attic Stair hall

Floor: Narrow yellow pine strip flooring installed in 1913 or possibly late 19th century.

Wall finishes – north (chimney wall): Painted horizontal matched boards over chimney in stairwell, probably 1913. From floor level up to ceiling chimney is original exposed brick and clay mortar with c. 1972 cement parging over the brick in the top 2'. Finish on each side of chimney is random width beaded vertical pine boards with a hand planed surface. They likely date to the late 18th/early 19th century, but were reused in current position c. 1840's -1890 when the current attic rooms were finished. The back sides of the boards (visible within the east closet) are finished with several different paint colors and have obvious lines where previous woodwork was attached to them (Fig. 15.8).

Wall and ceiling finishes – west, east, and south: Plain 6" wide pine boards with ship lapped joints. As these are not present in c. 1913 photo of the completed restoration work, they were installed sometime after 1913 to give a neater finish to this space. They are installed over the roof purlins, but the rafters protrude through them without any casing or finish.

Paint: Beaded boards are painted and likely have a few layers of historic pant from their previous usage underneath.

Stair railing: Simple board railing dates to 1913 or possibly the c. 1840's-1890 renovations.

Attic east and West Chambers

These rooms are virtually identical and are therefore described together. The 1894 newspaper article states that there were two finished rooms in the attic, which are presumed to be the current rooms.

Floors: Narrow yellow pine strip flooring installed in 1913 or possibly late 19th century over the original pine floor boards with substantial shimming to make the new floors somewhat level. An unusual detail regarding the original attic floor is that the original wide pine boards did not extend across the full width of the attic as single boards. Instead there is a continuous joint line on the second joist in from the rear plate (Fig. 15.1) with short boards completing the run to the eaves (these are also original). It is not known if this also occurs along the front eaves. Perhaps the flooring was not installed until after the roof sheathing was in place, as the sheathing would have made it very difficult to position the full length boards in the confined space of the attic.

Wall and ceiling finishes: C. 1840's - 1886 plaster and over plain wood baseboard up to the plaster ceiling. Where rafters protrude into the room beyond the plaster, they are cased with painted wood. The back side of the lath, plaster, and framing for them is clearly visible in the rear attic chimney bay and eaves crawl space. The lath is circular sawn, the framing is vertically sawn, and the oxidized color of the wood is similar to the darkish color of the hall chamber lath and furring rather than the light color of the parlor lath installed by Dow in 1913. There is a plain board baseboard around the perimeter of the rooms.

Wall framing – east and west ends: These were not examined, but the lath and plaster is presumed to be directly on the original studs. Some attic gable wall studs could be seen at the end of the attic eaves and looking over the top of the attic ceiling from the chimney bay. They all appear to be normal 3" deep studs.

Doors and windows: Simple board and batten door with flat board casings are from either c. 1840's-86 or 1913. Windows are all Dow restorations in 18/19th century openings. The presence and location of windows in the attic during the first period is not known.

Paint: Wood work is painted. Paint analysis comparing the layers on known 1913 woodwork such as the window casings with paint on items such as the rafter casings and door casings might clarify how much Dow did in these rooms. and when the plaster was installed.

Closets: Each of these rooms has a finished closet adjacent to the chimney bay. The original pine boards still form the floor for the west chamber closet. The east chamber closet has remnants of early 20th or late 19th century wallpaper on the plaster (Fig. 15.8). Much of the lath and plaster in this closet has been removed. In other respect the finishes of these rooms are similar to the chambers.

West (Parlor) Cellar

This cellar is probably original based on its ceiling being framed with a summer beam, the presence of clay and straw insulation over oak clapboards on the ceiling, and clay and straw parging on the masonry walls (Fig. 16.1).

Floor: Dirt

Walls: Dry laid stone with sizeable remnants of clay parging on the west wall and fragments on the east wall (Fig. 16.1, 16.3).

Ceiling and framing (Fig. 16.1, 16.6): Sub-flooring installed by Dow in 1913 forms the ceiling. This includes some reused beaded boards from former interior partitions with paint and wallpaper on

them (Fig. 16.2). Joists are framed into an east/west (transverse) summer beam. The last two joists at the west and east ends are original. They are joined into the original summer beam with a bare faced tenon joint, which is a relatively unusual and archaic joint. All the other joists are replacements probably installed by Dow in 1913. In installing the replacements the original mortises have been crudely recut up to the top of the summer beam to form butt cog joints, thus enabling the new joists to be dropped in place from above. Many of Dow's replacements have partially rotted, and more recent sister joists have been added to all the joists supported by ledgers added to the summer beam. Posts have been added under to the summer beam for added support. The outer portion of the parlor hearth is supported on an old beam that crosses the summer beam. Whether this arrangement is early or a make-do reusing an old timber by Dow is not known. The sills are all 20th century replacements. The chimney girt may be an original timber rather than a deteriorated Dow replacement. A unique feature of the basement ceiling is a thick layer of clay and chopped straw against the underside of the sub-flooring and supported by unused original oak clapboards laid over a series of wood rungs that are let into the joists about 25" apart like the rungs of a ladder (Fig. 16.5). Appleton's notes state that much of this was found on the cellar floor rather than in place. This may have been intended to function as insulation to keep the basement cooler in summer for food and dairy storage.

Access: Exterior bulkhead that dates back at least into the 19th century and may be original as the masonry work looks quite consistent with the walls. Notes from the 1913 work state there was trap door in the parlor floor. If so Dow did not include it when he relaid the floor.

East (Hall) Cellar

As initially constructed this cellar extended only under the front half of the hall and had a somewhat higher floor than the current one. It was probably not extended to the north wall and dug out to its current depth until either 1913 or perhaps the mid-20th century (Fig. 16.4, 16.6). There is not sufficient physical evidence to determine if the initial construction of this cellar dates to 1683, or if it was first dug out in the 18th or early 19th century. Its masonry walls have been considerably reworked and heavily pointed with cement mortar making comparison with the parlor cellar masonry difficult. Its ceiling framing is single joists from front to rear without a summer beam. This type of framing is typically used over a crawl space where informal stone supports can be placed at intermediate points to support the long joists, but could also work over a half cellar where the rear wall would provide support at the mid point of the joists.

The presence of two original cellars in first period construction is unusual, but according to *Cummings* there are several documented examples including the Fairbanks House in Dedham. The norm is a single small cellar that was directly accessible from the kitchen (i.e., hall) for the storage of food and dairy products. This cellar was usually under the parlor with access by a straight staircase from the hall leading under the front stair to the cellar. At the Capen House there has never been a cellar stair and thus no direct access from the hall to the parlor cellar. One can speculate that the small hall cellar was constructed as an original feature to serve as a dairy with direct access from the hall by way of the trap door that still exists, and that the larger parlor cellar was intended to provide longer term storage for food and other items. In the absence of detailed inventory, building contract or other documentation, there is no basis to definitively determine the age and original function of the hall cellar.

Floor: Cement installed in the mid-20th century.

Walls: Dry laid stone heavily pointed with cement mortar in the mid-20th century. The base of some of the walls has been buttressed with cement steps indicating the floor was dug deeper when the cement was laid. A section of cement block buttresses the chimney foundation where it was altered to extend the cellar towards the back wall to accommodate a furnace.

Ceiling and framing: Sub-flooring of wide pine boards extending the full width of the cellar (Fig. 16.7). Boards are all vertically sawn probably dating back to at least the early 19th century. The last 4' towards the north wall are 1913 replacements by Dow in conjunction with reframing the lower part of the north wall. The joists are vertically sawn on all faces and in good condition except where they have been spliced in the northernmost 4' due to the moisture problems of the north wall (Fig. 20.4). They are clearly old but difficult to date beyond the 19th century. Given that this was at least partially a crawl space it seems unlikely that the original joists would have survived in the condition these are in. A transverse support timber has been added to them in the 20th century. The sills have all been replaced, except a short section of old sill under the south end of the east wall that might be original.

Access: Exterior bulkhead that dates back at least into the 19th century based on photographs. Notes from the 1913 work state there was trap door in the hall floor that is presumably the one still present at the front wall. its age is not known.

ARE THERE ANY MAJOR RECOMMENDATIONS REGARDING THE HOUSE CONDITION, AND ANY URGENT CORRECTIVE ACTIONS REQUIRED TO PRESERVE THE HOUSE FROM DETERIORATION?

Other than the recent replacement of the roof shingles and routine repainting, the house has not had any major maintenance since the 1975 grant work funded by the Massachusetts Historical Commission. The current investigation found a number of condition issues concerning the windows, the exterior cladding, the chimney, site drainage, and basement dampness/housekeeping. A considerable amount of past structural deterioration was also revealed that appears to be stable but warrants monitoring for signs of renewed movement. While not critical, repair of some of these structural conditions would return the affected members to their intended function and prevent further deterioration. Although not strictly condition issues, the presence of plumbing and a water based heating system present some risks to the historic fabric and collections from the risk of leaks. These do not appear to remain functionally necessary with the construction of the Gould Barn and plans to rebuild the rear ell as a caretaker's cottage. The removal of these systems is therefore recommended along with any accessible insulation that prevents the routine monitoring of the condition of structural members.

The conditions component of this study is not intended to be definitive, and all examples of particular problem components such as the windows have not been systematically surveyed to locate all areas of damage or provide a schedule of conditions and repairs. Examples of the various issues are illustrated on the Sheets # 17-20.

Windows:

The exterior of the window frames, trim and sash have widespread areas of extensive deep weathering, more limited areas of substantial rot behind the surface, and some hardware failure. The damage is greatest on the more exposed upper story windows. Typical weathering problems involve the trim on the sides and bottom of the frames (Fig. 19.8). This appears to be 1/2" stock applied over the frames, and the weathering and splitting often extends clear through the wood. The affected pieces need to be replaced with matching new stock, which appears to be a fairly simple repair except where the the sash hinge pintles penetrate through the stock. In those cases the pintles will have to be removed and remounted once the new stock is in place. It may be difficult to remove and remount the pintles without causing them to become excessively loose or damaging the frames. In a few cases the frames or the adjacent sheathing or studs may have become punky, making the repairs considerably more complicated.

The frames appear to be simple boxes constructed of 1" pine stock that are set between the studs with shims, but until the trim is removed the construction of the frames and how they can best be repaired cannot be determined. The needed repairs are probably within the carpentry capabilities of some Society members provided they are willing to take the necessary time to back prime all new stock and cut neat, tight joints. It is recommended that one of the windows in worst condition be tackled as an exploratory project to determine the construction details behind the trim and the extent of the worst case deterioration.

The hardware problems are limited to missing pintles, broken pintles or pintles set in wood frames that have become punky around the pindle. As windows with these problems may fall out when unhooked from the interior, caution should be used when each window is opened.

A few of the sash were found to have rotted interior wood at the lower corners joints behind a sound appearing surface. The other problem plaguing the sash is chewing on the interior by squirrels that have become trapped inside the house (Fig. 20.9). Where the corners are rotted or the chewed surfaces are considered aesthetically unacceptable, a matching new sash should be constructed and the existing leaded glazing and hardware transferred to the new sash.

The leaded glazing generally appeared to remain in serviceable condition, although we did not closely examine the putty in many of the windows. If the putty is found to be void or flaking out of the lead comes, the sash should have the existing putty removed and new installed. As these are routine architectural leaded glass rather than artistically valuable stained glass, this work can be done by a reasonably competent local stained glass artisan rather than a specialized conservation studio.

Once the construction and typical extent of damage is better understood by doing a sample window, each of the windows in the building should be individually surveyed to map out the work needed for each case. The first priority should be placed on windows with hardware problems to prevent accidental damage when the windows are opened.

If particular windows are routinely opened in the summer for ventilation, those windows should be fitted with interior screens to keep out insects that could damage collections materials. Most of the second floor window frames have a place for hinged screens that are no longer present.

Clapboards and trim

Many of the original oak clapboards and some of the trim have developed splits and excessively deep areas of weathering (Fig. 19.2, 19.5). This is particularly a problem at many of the lapped ends of the clapboards. Selective replacement of the most damaged clapboards and trim pieces is the minimal treatment needed to maintain the weathertight integrity of the house.

It was also observed that many of the clapboard ends were beveled on a table saw rather than using a drawknife on a shave horse. It is not possible to get a properly beveled cut on a table saw due to the tapering thickness of clapboards. The result is that the actual overlap of the ends is very short (Fig. 18.1), and minor defects at the bevel (which were present on many clapboards) can easily lead to water getting behind the clapboards. With a properly skived bevel, the overlap at the ends is about 2", which affords much better water penetration protection.

During the 1975 repairs to the building an epoxy filler was specified to fill major holes and splits in the east facade verge boards, pendent drops, and some clapboards. The painter doing the work apparently liked the product, as we found that most of the oak clapboards removed to explore the west end framing had substantial quantities of the epoxy being used like a caulking compound to fill many splits and gaps including the end joints between clapboards. Unlike some old epoxy applications we have observed, the epoxy seemed to still be tightly in place and was not causing the wood around it to rot. It was, however, gluing the clapboards to the sheathing and at the ends to each other. While it has preserved clapboards for another 25 years that might otherwise have been replaced in 1975, it makes it more difficult to now selectively remove clapboards for repair or replacement without damaging them.

The current surface erosion of the clapboards and trim is a product of allowing the clapboards and trim to weather naturally without paint for 50-60 years following the 1913 restoration. Dow continued to be involved with the Topsfield Historical Society for over 20 years following the restoration, and it is reasonable to assume that he consciously left the building without paint so it would develop a naturally weathered appearance just as it probably did in the years following its 1683 construction (Fig. 1.3, 19.4). Once the exterior has reached the desired level of weathering, the difficulty is how can that appearance be maintained without the weathering progressing to a state of substantial deterioration.

If a museum building is to be interpreted with an unpainted, weathered surface, it should be assumed that some clapboards and trim will have to be replaced occasionally as a matter of routine maintenance. Photographs from the 1930's show that some of the clapboards were warping severely at their ends, which by the 1960's had been replaced with short lengths of new clapboards (Fig. 1.3). The warping may have been result of using clapboards that were flat sawn as opposed to radially sawn or hand riven as the originals would have been, and the improper bevel of the ends may have aggravated the splitting of the ends. But some problems of this sort are inevitable with the best of stock if the building is left unpainted for a long time.

In the case of the Capen House, records indicate that by the 1960's the house was being stained rather than left unpainted, and the stain used in the 1975 repairs was opaque enough to mask the color of the epoxy repairs. Currently, it appears that an opaque stain is used on the house, and with the buildup of multiple layers it looks like brown paint rather than stain (Fig. 19.2). Except for the areas of eroded surface texture, the patina of natural weathering is no longer apparent and the exterior is not being presented as Dow intended. This presentation issue is further aggravated by the use of smooth red cedar clapboards for replacements rather than white oak for the last 50 years. As a result of being painted ever since they were installed, these replacements have not developed any surface texture (Fig. 19.3). In most cases the ends have been butt jointed rather than skived and lapped, which further calls attention to them in relation to Dow's clapboards.

As currently presented the exterior of the house is substantially different from Dow's intentions and its actual presentation through the 1950's. Its color is uniformly dark brown. Much of the remaining original Dow clapboards and trim has weathered to the point of looking both shoddy and risking water penetration to the sheathing. In contrast the many replacement clapboards stand out as excessively smooth and characterless (Fig. 19.3).

Basic protection of the building can be achieved by selective replacement of only the very worst clapboards and trim using readily available pine and cedar stock, or with a little effort white oak stock. Replacement pieces should duplicate the length, nailing patterns and nail head types, and

lapped ends of Dow's clapboards (but with a correctly shaped bevel). The use of white oak clapboards for replacements is strongly recommended. These can be obtained on a custom sawn basis from Sky Lodge Farm in Shutesbury, MA. It would be wise to order enough at one time to stockpile clapboards for future repairs as well as immediate needs.

At some point the Society should grapple with the philosophical issue of exterior presentation. A decision to return the house to an unpainted weathered appearance as intended by Dow would require one of the following two radical treatment options applied to the entire building:

1. Strip all the paint from the clapboards and trim, ideally coupled with replacing all the red cedar clapboards with white oak having lapped and skived joints.
2. Replace all the clapboards and trim with new white oak having lapped and skived joints. A variation would be to strip the paint from some of the major trim elements such as the verge boards.

Option 1 has the advantage of preserving the remaining fabric installed by Dow and thus being more politically correct in relation to current historic preservation standards. Its disadvantages include difficulty of execution (stripping paint would best be done chemically and is expensive), getting the paint residue out of the weathered surfaces will be difficult if not impossible with a potentially unsightly appearance, and the heavily weathered elements will eventually require replacement (which will be out of cycle with the eventual replacement of the newer material).

Option 2 has the advantage of being straight forward and getting all the components on the same weathering/replacement cycle. Its disadvantages are the loss of the original Dow material, and that the building will look "like new" for a number of years, just as it did at the completion of the 1913 restoration.

The execution of either option requires the Society to adopt a policy that the exterior fabric of the building (other than the remaining original bracket) is sacrificial to the goal of presenting the building with the unpainted weathered appearance intended by Dow (which is also more accurate to its probable 17th century appearance). The implication is that when the clapboards and trim become too weathered to protect the building from water penetration they would be replaced and the weathering cycle started again. This also has long-term cost implications, as periodic total replacement on a 50 year cycle may be more expensive than regular maintenance painting.

Chimney

The chimney above the roofline has a number of deeply spalled, cracked and loose bricks in the top courses, and many moderately spalled bricks and open joints throughout the lower two thirds (Fig. 20.11). A few of the bricks are sufficiently displaced to have a potential to fall and are therefore a potential safety hazard. Other issues include the lack of any screening to keep out animals and insects, and the lack of a cap to minimize the wetting of the inside of the chimney.

The masonry appears to be in reasonable condition below the roofline with problems limited to some chronic minor spalling on the first floor due to dampness wicking up from the basement foundation, and some limited cracking at the front stairs (Fig. 20.10). The interior portions of the chimney are laid up in clay mortar which remains visible in a number of locations.

Repair work focusing on extensive parging of the interior flues in 1972 was unfortunately done with a predominantly Portland cement hard mortar (Fig. 12.6). Dow also used cement mortar for his 1913 restoration work. Hard mortar used on soft brick and clay mortar can cause a number of problems over time such as accelerated spalling and cracking because of differential movement between areas bonded with hard mortar and areas with soft, more flexible mortar. The grey color of the cement mortar is also aesthetically inappropriate. So far there do not seem to be any obvious problems from this work other than the unattractive appearance of the parged areas visible in the fireplaces (Fig. 9.4, 12.5).

The 1975 work repointed portions of the chimney and replaced some deeply spalled bricks. It had been intended to apply a chemical consolidant to the remaining spalled brick, but this was not carried out on the basis that the process was too experimental. The spalling was correctly diagnosed in 1975 as being the result of Dow's using excessively soft old brick (they were probably never intended for exterior exposure) with hard Portland cement mortar that hastened their deterioration. Comparing the 1975 photos to current conditions, the spalling of the lower bricks is not dramatically worse, but the upper third has fared quite poorly.

Treatment of the interior masonry should be limited to keeping the basement better ventilated and reducing its dampness, and monitoring the cracked areas for any substantial changes from the current conditions. The use of the fireplaces for actual fires is not recommended as being counter to widely accepted standards of museum practice. While the risk of a house fire may seem small, the results would be the catastrophic loss of irreplaceable and unique historic fabric of national importance.

Repair options for the chimney top range from selective repointing with limited brick replacement and installation of screening, to complete rebuilding from the roof-line up.

The repointing option would probably forestall the need to replace the chimney for another 15-25 years, but cannot be expected to last indefinitely. The spalling of the lower brick will continue at its current rate, and the chimney will probably wick water down to at least the attic level during periods of prolonged rain due to the high porosity of the spalled brick. The application of a water repellent to the brick is not recommended as it will likely aggravate problems over the long-term.

The addition of a raised bluestone cap would still allow the chimney to provide ventilation for the house and reduce the risk of condensation inside the chimney that often occurs when a tightly sealed cap is installed. Such caps are not known to have been used in first period construction and it would also be a modest change to the appearance Dow intended for the chimney.

The complete rebuilding option should be done using salvage early brick (not from this chimney) that have been carefully selected to avoid underburnt bricks not intended for exterior use. The brick should be laid in a high lime mortar compatible with their strength. Using new "restoration" brick would look too uniform and modern to be faithful to Dow's picturesque intentions. The documentation of the 1913 restoration does state that Dow's mason made an error in laying out the chimney by making it too narrow. The chimney does appear unusually thin; the option of rebuilding to Dow's intention rather than exactly copying the width of the existing is worth considering if the chimney is to be rebuilt. It is clearly stated in the records that it is based on photographs of the chimney on the former Hunt House in Salem.

Whatever option is chosen, the work should only be done by a mason with substantial experience in doing appropriate work to early masonry, and should be executed using relatively soft high lime mortar.

Site Drainage

The house has had a long history of chronic dampness along the north wall. This is due to both the site topography and the gradual buildup of soil along the rear perimeter of the house so that the grade line is now nearly even with the top of the foundation. Although we did not observe any active seepage in the cellars, moss growing on the wood watertable adjacent to the chimney flue (Fig. 20.7) and on the ground around the northwest corner (Fig. 20.1) is indicative of the problem. There is a narrow band of gravel along the north foundation from the northwest corner to the rear ell that is probably intended to channel roof drainage towards the northwest corner. There are no records of any subsurface perimeter drains. There are no gutters on the house. The extensive tall trees around the house would make maintenance of gutters a major chore.

Water accumulating along the north wall is likely from two sources. One is ground run-off draining along the shallow slope from the crest of the shallow rise behind the house. The other is roof drainage. The topography combined with the lack of sunlight on the north side tends to hold water from both sources along the back wall. The stack for the furnace flue near the northeast corner exacerbates the situation by trapping roof drainage water at its base where the water table and sheathing are currently rotted clear through and soaking wet (Fig. 20.8).

Ideally the grading behind the house should be reworked to create a shallow swale 5'-10' north of the rear wall that would intercept and channel ground runoff well beyond the northwest corner. The grade at the building base should be lowered a few inches and reworked to also pitch towards the swale (i.e., the grade of the swale should be lower than the grade at the rear wall. Subsurface drainage should also be run along the rear wall to dispose of roof drainage well away from the northwest corner. If possible this would be perforated pipe several feet below grade and disposing of the drainage at daylight well down the slope of the hill to the west the building, or in a drywell. A lower tech solution would be a simple french drain along the north wall.

The grading near the northeast corner is complicated by the larger stone outcrop at the base of the furnace stack as well as the stack itself, and by runoff from roof of the link to the ell. If possible the stack should be completely removed. Assuming the ell is rebuilt to house a caretaker there will be no compelling reason to retain both the plumbing and the heating system in the historic house. The design and construction of the new caretaker's cottage should be coordinated with site drainage improvements and issues of controlling the roof run-off from both buildings and the link between them.

Regardless of other measures, the existing rotted water table and sheathing between the furnace stack and the ell should be replaced and the sill behind them checked for deterioration and repaired if substantial rot or insect activity is found.

All of these recommendations must be tempered by archeological concerns and maintaining the visual setting of the house. Any ground disturbance including shallow regrading should be preceded by professional testing for potential archeological resources, with the design modified as required by the results of the testing. In addition to the builder's trench around the foundation, the area north and particularly northeast of the house is very likely to have remains of kitchen garbage, privies, and related services.

Basement - dampness and housekeeping

The west (parlor) cellar exhibits a long history of chronic dampness as reflected in the large amount of past insect and rot damage visible in the ceiling framing. The dirt floor is littered with pieces of wood and other items in a crude form of storage (Fig. 16.1). Some of these may be collection materials included historic wood components from the building that have been replaced with new material. The wood in direct contact with the soil is an open invitation to insect infestation.

All these materials need to be removed from the cellar and sorted out between collections materials that should be saved and other material that should be discarded rather than stored. Wood fragments should be carefully examined to determine if they are historic materials removed from the building including items removed by Dow, and also for signs of active insect infestation. Materials to be saved should be labeled and moved to appropriate storage locations (hopefully not within the house) and other materials discarded.

The only places that potentially active insect activity was observed were the front sill and adjacent chimney girt where some of the existing holes and related frass (like sawdust) looked relatively fresh and bright in color (Fig. 20.2). However, the north (rear) sill is several feet back of the foundation wall and could not be adequately viewed to assess its condition. These areas should be monitored to determine if the activity is current; if it is, the basement should be treated by a qualified exterminator.

Once the debris has been cleaned out, conditions in the cellar should be actively monitored by frequent visual inspection, especially after heavy rains and during spring thaws, for both humidity levels and moisture seepage. Placing an electronic data logger in the cellar for a full year would also be helpful. The weather during our examination of the building was unusually dry; we therefore doubt we observed the normal range of conditions in the cellars.

The only ventilation in the west cellar is provided by a couple of 4" ceramic drain pipes through the foundation fitted with screens to keep out critters. Assuming the monitoring finds prolonged periods of excessively high humidity, ventilation should be enhanced by enlarging these and/or adding additional screened openings. A pair of small exhaust/intake fans set in opposing openings wired to go on only when humidity rises above a preset amount would also help. If there is no seepage coming in through the side walls, placing a layer of heavy plastic over the dirt floor can also reduce the humidity generated by moisture evaporation from the soil surface. While pouring a cement floor over a vapor barrier would reduce the humidity, it would harm the historic integrity of what appears to be a cellar in largely original condition and is therefore not recommended. Note there are periods when bringing outside air into a cellar can increase rather than decrease humidity. In most cases the frequency of such conditions compared to periods when ventilation decreases humidity makes this not a significant concern.

The east (hall) cellar appears to be considerably dryer, probably due to the furnace adding heat during the winter and the cement floor limiting transpiration from bare soil. Evidence of past insect activity was considerably less on this side. Framing at the north end of this cellar was been completely replaced in 1913 with new ends spliced onto the older joists (Fig. 20.4), and some framing replacement may be considerably more recent. Several replacement joists showed continued deterioration at the junction to the north sill (Fig. 20.3). Given the dampness problems observed at the water table adjacent to this area, the rear wall should be regularly checked for signs of continued deterioration that warrant the replacement of damaged members. A letter report by Philip Baker of

Antrim N.H. dated 1964 cited a need for sill replacement along the east wall, but there is no record as to whether this was ever done beyond the rear section of the water table appearing to be newer than the front. Monitoring should include this area as well as the rear. If the furnace is removed the large panel of fire protection board should be removed from the ceiling to facilitate monitoring the condition of the framing it now obscures.

The recommendations for the west cellar regarding routine monitoring for both ongoing deterioration, moisture seepage, and humidity also apply to the east cellar.

Areas of structural frame damage

Substantial past damage to structural members was observed at several locations along the overhanging front girt, at the east end first floor girt over the east exterior door, and at the joints of the rear chimney girts to the rear girts and roof plate. The frame of the rear wall in general exhibited substantial distortion from past settlement and rotation associated with the rotting of the rear sill and lower studs.

Most of these conditions appear to predate Dow's 1913 restoration. Dow's repairs included measures to stabilize most of these conditions except the rot of the front overhanging girt where it spans the hall summer beam. Whether his repairs have been effective, or the tendency of the sheathing to act as a membrane tying the framing together has kept the frame stable despite the deterioration is not clear. No signs of active movement associated with these defects were observed. For instance, 1" thick plaster fillers at the rear chimney posts in the gaps generated by the rear plate and girts shifting outwards do not show substantial cracks. Although the age of the fillers is not known, it seems reasonable to assume they have been in place for at least 50 years.

The damage to the front overhanging girt as it passes over the hall summer beam was examined by Wayne King of Ocmulgee Associates, consulting structural engineers. He also reviewed the other conditions described above. A letter report outlining his findings is attached in the Appendix.

His conclusion regarding the front girt damage is that the loads are being effectively carried by the front roof plate and transferred down through the chimney and corner posts. Essentially the overhanging girt is suspended from the wall studs which are secured to it by pinned tenons and the exterior sheathing, and the fact that it is discontinuous no longer matters. He indicates it can be effectively repaired to again function as a load carrying member by splicing in new sections with epoxy, although the repair is not critical to maintain the current stability of the front wall.

He also notes that the other areas of deterioration appear stable, but cautions that the fastening of the sheathing and flooring to the rear posts, girts, and plates must remain sound to effectively tie those members together given that some of their joints are no longer restrained by pins and mortises. Although there are no records of structural repairs to the rear of the building since 1913, there are sizeable areas of replaced clapboards that may be from more recent inspection and/or repair work to the rear chimney posts. The area of the west wall opened up revealed that, although not noted in Society records, the bottom 6' of the northwest corner post had been ended out within the last 50 years.

One other condition observed that could indicate structural deterioration was a lineal buckle in the plaster below the front parlor windows. This should be opened up as required to repair the plaster at which time it can be determined if this reflects structural deterioration to the window studs or sill below, or is simply a function of past repairs to the plaster.

In the attic rooms and adjacent closets there are some areas of bulging plaster at the top of the knee walls. The most severe occurrence was at the rear wall of the east room closet. The location of the bulging plaster is directly below a line of roof purlins. The bulging reflects the permanent deformation of the roof purlins from moderate overstressing from roof loads over the life of the building. Such overstressing and deformation is typical for most first period roofs because of the dimension and spacing of the purlins. Repair would require the introduction of additional substantially larger purlins adjacent to the existing ones. Where the deformation is substantial the new purlins would either have to be scribed to fit the existing deformation, or the roof boarding straightened out with obvious consequences for the shingles (i.e., the repair would need to be coordinated with reshingling the roof). The condition should be monitored for any substantial increase in the deformation, at which point further investigation and repair would be warranted.

Recommendations regarding the above framing conditions are that areas with known past problems should be routinely monitored for any signs of active movement, but repairs are not mandatory unless signs of active movement or distress are observed. In the case of the overhanging girt at the hall summer beam, repair would be desirable to limit potential future deterioration to both the girt and the summer beam, but is not critical for structural stability. Redoing Dow's repair to the overhanging girt at the easterly parlor summer beam would be desirable for the same reasons. If carried out, care should be taken to not damage the intact obsolete mortise for the former hall chamber window stud. Any future work that requires opening up sheathing in the rear wall should be done with an awareness of the fragile condition of the post/plate/girt joints.

SIGNIFICANCE AND INTERPRETATION ISSUES

This study has confirmed that much of Dow's 1913 restoration is by today's standards of scholarship highly inaccurate and dated. Dow was concerned equally with providing an effective stage set for his concepts about 17th century life, and with preserving actual 17th century historic fabric. Where the fabric was missing or inscrutable, he apparently had no problem inventing it to create the desired overall effect. Today we are biased towards the preservation of historic fabric and recreating missing features only when we believe there is sound evidence based on a building archeology approach and accurate documentation.

Dow's restoration of the Capen House effectively preserved the essential first period components of the house that had survived up to 1913 such as the exposed frame of the ceilings and walls, the bracket on the west gable, and the clay insulation below the parlor floor. The other brackets and drops restored on the exterior are based on reasonably sound evidence. Without his efforts the house probably would not have even survived at all.

On the other hand, in the spaces that are restored he removed all materials that were not obviously from the first period without recording them, and provided new finishes such as the ubiquitous unpainted feather edged sheathing that is not remotely accurate to the 17th century but created the atmosphere he sought. The windows are an adaptation of 17th century glazing applied to the 18th century openings and the application of clapboards and trim generally follows 18th century practice rather than the 17th century. The restored features are in some cases such as the sheathing identical to his restoration two years earlier of the John Ward House at the Essex Institute, and he used many of the same contractors in both restorations.

In Dow's time, both the Ward House and the Capen House were widely publicized as outstanding and perfect examples of restoration to the 17th century. The Capen House hall and stair hall were

duplicated as period rooms in New York's Metropolitan Museum of Art where they remained on display until the period rooms displays were reinterpreted a few years ago. The house has been featured as a primary example of the first period in most 20th century architectural history texts. Photographs of the interior and exterior by Samuel Chamberlain have popularized the image created by Dow in many publications since the 1930's.

In evaluating the significance of the Parson Capen House and determining appropriate future interpretation there are two distinct themes. One is clearly the preserved first period fabric such as the frame along with the general exterior form of the house, which is accurate to the 17th century. Considered by itself this fabric has a high degree of integrity and warrants its status as one of the primary surviving examples in the country.

The other is the restored features and overall effect of the house created by Dow in 1913 as a primary example of Dow's substantial influence on the early 20th century preservation movement. Other than the application of paint on the exterior and the newer clapboards, the restored portions of the house remain essentially as presented by Dow in 1913.

Most of the other houses restored by Dow are either in private hands where they have undergone considerable further change, or are owned by institutions that are not actively interpreting them. In the case of the John Ward House, the Peabody-Essex Museum is considering a major re-restoration of the building that would substantially alter Dow's interpretation.

Most other first period Essex County houses that were restored as museum structures in the early 20th century have been repeatedly restored and reinterpreted so that they no longer convey their initial "restored" image. Examples include the Whipple House in Ipswich, the Balch House in Beverly, and the Claflin House in Wenham, where the initial interpretations were substantially changed by Roy Baker in the 1950's. In these cases further reinterpretation to make their presentation more accurate in the light current scholarship would be justifiable as long as the changes do not destroy significant early fabric.

In the case of the Capen House, any effort to reinterpret Dow's "mistakes" will simply be another stage set based on our current understanding of period typical features because there is not sufficient evidence in the house for a more accurate restoration of most features. The limited aspects that could easily be redone with more accuracy, such as the details of clapboard and trim installation, will simply muddy the interpretive water if a significant part of what is being presented is Dow's interpretation.

It is therefore recommended that the Society's interpretation should focus both on the actual first period frame, and on presenting the restored aspects of the house as an intact example of Dow's vision and the early 20th century attitude towards 17th century America. The unrestored parlor chamber should be left largely as is and used as gallery space. The hall chamber could be used as a "study room" by removing some of the plaster finishes to expose the unrestored frame and ceiling and displaying interpretive panels about Dow's restoration and first period architecture. The current bathroom and kitchen fixtures in the rear should be removed to get the plumbing out of the museum portions of the house. These spaces could then be reconfigured as a museum shop and storage area. On the exterior, the underside of the over hang should be left open to expose the framing, as Dow initially treated it. Although not critical, it would be desirable to eventually restore the exterior to Dow's original interpretation of unpainted, weathered oak clapboards and trim.

CHRONOLOGY OF IMPORTANT DATES, DOCUMENTS, AND RECENT REPAIR RECORDS

- 1683 Initial construction by Rev. Joseph Capen
- 1725 House passes to Capen's son Nathaniel Capen; no inventory has been found.
- 1748 Nathaniel Capen dies in March; Inventory and Will of Nathaniel Capen.
- 1747-58 Series of transactions: in 1747 before the death of Nathaniel Capen half interest in the house is sold to a John Baker of Boxford, with the other passing to Baker on Capen's death in 1748. After a complex series of transactions the entire house eventually passes to John Emerson. Emerson did not live in the house, but it has been conjectured that his daughter and her husband John Baker may have occupied it.
- 1725-61 Major renovation of house: first period casement windows replaced with wood sash, walls sheathed and reclapboarded. Date range is conjectural based on changes of occupancy.
- 1774 Thomas Emerson inherits house and property from his father John Emerson but did not live in it based on recollections by Rev. Wm. Bentley in 1814.
- 1798 Emerson's property is listed in the Direct tax of 1798, but it is not clear if any of the listed buildings are the Parson Capen House.
- 1813 Emerson's sons Joseph and William inherit the house and property. Dow speculates the house was used to house hired farm hands.
- 1814 Rev. William Bentley of Salem visits Topsfield and describes the house in his diary as "nearly in its primitive state & is the place to receive the families of the men who labor on the lands around, Mr. Emerson keeping 600 acres in cultivation & use around him. Mr. Capen's house is of two stories with jutting second stories & a very sharp & high roof. The beams & joice are naked within but the floor timbers are less than usual at that time of building"
- 1835-86 House and property passes to Harriet Josephine Emerson Holmes and husband Charles H. Holmes. With some title complications it remains with Holmes until his death in 1886 in Maine. Holmes lived in the adjacent Averill House (now parsonage) until his wife's death in 1849 and again in the 1880's. Whether he ever lived in the Capen House is not known. During the later part of this period the house was rented by Holmes to a Mrs. Alonzo Kneeland (see 1894 entry).
- 1835 -86 At some time during this period substantial renovations occur at the house including much replastering on circular sawn lath, the installation of ceilings on the underside of the joists, the finishing of the two attic rooms and the introduction of 6/6 sash in the 18th century openings.
- 1886-1913 Ownership of the house is cloudy

- 1894 Description of the house and drawing of exterior in Essex County Mercury Weekly Salem Gazette. Article states house has been occupied Mrs Alonzo Kneeland for the past 40 years (since c. 1854) and describes the house as having three rooms within each of the original two first floor rooms, six rooms on the second floor "finished in modern style" and two finished rooms in the attic.
- 1913 House acquired by Topsfield Historical Society and restored by George Francis Dow. William Sumner Appleton visits the house on October 5 and 13, 1913 taking photographs and making a few written notes of the work in progress. Photographs and a few pages of correspondence are in the SPNEA Archives.
- 1914 March 9 letter from Dow to Appleton responding to questions as to the evidence for the drops and brackets, the water table, and chimney. March 14 letter of Appleton to architect W.D. Austin of 50 Bromfield Street, Boston regarding the incomplete state of measured drawings of the house that Austin was preparing showing the house frame. These drawings have never been located unless they became the ones eventually done by Donald Millar.
- 1916 Drawings of the house as restored by Dow published in a portfolio titled *Measured Drawings of Some Colonial and Georgian Houses* by Donald Millar, the Architectural Book Publishing Company, New York City. All other drawings of the house derive from these, including the HABS drawings. The set of blueprints of Millar's drawings owned by the THS has a substantial error in the width of the chimney bay as drawn, but the published drawings are correct.
- 1920 Article by Donald Millar on the Restoration of the Capen House published in Old-Time New England, the journal of SPNEA. The same article was also published in the Architectural Record.
- 1924 Reproductions of the hall and stair hall constructed as period rooms in the New York Metropolitan Museum of Art's American Wing with assistance by Dow.
- 1935 Publication of *Everyday Life in the Massachusetts Bay Colony* by Dow, which included photographs of the restored Capen House.
- 1935-7 Photographs of the exterior taken for the Historic American Building Survey.
- 1936 Death of George Francis Dow
- 1938 One page of a 3 page letter to Miss Susan Hoke Eisenhart from William Sumner Appleton regarding the Capen House questioning the concept closing in the front overhang with a board, and discussing the lack of evidence for Dow's window restoration beyond perhaps a single casement sash at the Essex Institute with rectangular lights.
- 1946 Unspecified "repairs" for \$65.75 by E. M. Dow (G. F. Dow's brother who was a local contractor ?)
- 1947 Work to oil burner and pumping out cellar.

- 1950 Shingle and clapboard work for \$800 by E.M. Dow; paint and whitewashing work by Elmer Foye.
- 1958-59 Estimates for repairs to house including new roof with cedar shakes rather than shingles, west basement framing, regrading north wall, renailing loose clapboards, and repairs to rear shed. It is not clear how much was actually done such as the roof. Architect Jack Pierce was involved. \$817.16 spent.
- 1960 Work rebuilding the rear shed possibly including staining of house; \$539.46.
- 1964 Major renovation of second floor caretaker's apartment. Specifications and set of plans drawn by Jack Pierce showing second floor before and after the work. Specs also called for some other work including capping chimney with copper, applying Dow silicone to it and the first floor fireplace bricks. Some of the specified work does not appear to have been done.
- 1962 Report of the house Committee that "there was indications of some settling in a section of the house foundation" that was to receive further investigation.
- 1964 May 22 report on condition of house from restoration contract or Philip W. Baker of Antrim N.H. (related to Roy Baker) included recommendation to replace the east sill. There is no indication Baker was hired to do the recommended work.
- 1971 Repairs by John Lebel of Danvers to parge interior of chimney flues to 2nd floor ceiling, parge exterior in attic and remove cooper cap installed in 1964 including state of 2nd floor fire boxes reported in Jack Pierce memo.
- 1974 Plans and specifications by Jack Pierce for rebuilding rear shed with work done by Contractor William A. Berry and Son of Danvers.
- 1975 Massachusetts Historical Commission grant for repairs, clapboard replacement and painting to exterior, and replacement of furnace to specifications by SPNEA Consulting Services architect David Hart.
- 1979 Fumigation for powder post beetles by a Mr. Hogan for \$1,240.
- 1999 Reroofing of house with red cedar shakes by Arron Sturgis of Eliot, Maine. The tall brick furnace chimney was replaced by a shorter steel stack encased with plywood and clapboards.

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Ward, Barbara M. and Gerald W. R.; *The John Ward House*; the Essex Institute, Salem, MA, 1976.



1.1: C. 1880's photo of the house showing the west and south facades. The arrow points to the one surviving original gable bracket which is still present on the west facade. The house was locally known for its venerable history. Its first written documentation was an 1894 newspaper article. The house had been tenanted for well over a hundred years at the time of this photo. The windows have 19th century 6/6 sash in them, but the openings date back to the 18th century.



1.3: 1960's photograph showing naturally weathered appearance.



1.4: C. 1880's photo of the house showing the east and south facades. This may be a little earlier than photo 1.1 above, as the chimney is in a little better condition. The leanto shack serves as a vestibule for the 18th century west entry door. Defective flashing and roofing at its junction to the gable wall (arrow) were likely the cause of the extensive decay in the east end girt still visible in the Hall.



1.5: George Francis Dow standing in front of the house in 1913 during the restoration work. The east chimney post is in the background.



1.6: Current appearance of the front and west facades of the house. The current treatment of dark brown opaque stain has been used since the 1970's. The wood shake roof has a rougher texture than the wood shingles that were used historically.



2.1: Existing bracket at west gable attic overhang. This specific bracket can be documented back to the 1880's in historic photographs, and is therefore probably original. The east gable bracket is c. 1913 based on this one.



Photograph courtesy of SPNEA

2.2: West gable bracket in place in 1913 construction photo taken before window was removed. Comparison of the grain pattern on this bracket with the existing one verifies they are the same.

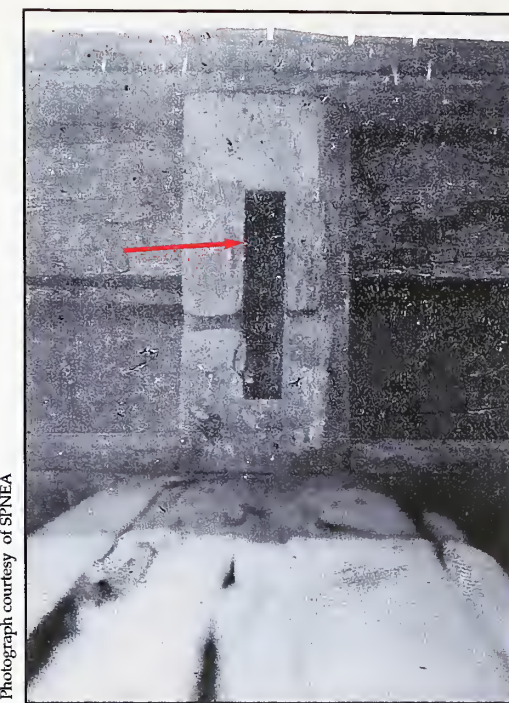


2.3: 1913 Bracket at front overhang under east chimney girt. The overhanging girt is visible at the top of the photo after the removal of the modern soffit; it shows an old repair at A.



Photograph courtesy of SPNEA

2.4: 1913 photograph at the west front chimney post and girt. The gain cut into the post is visible with the hacked off remains of the bracket tongue still in place. This provided Dow with the height of the bracket.

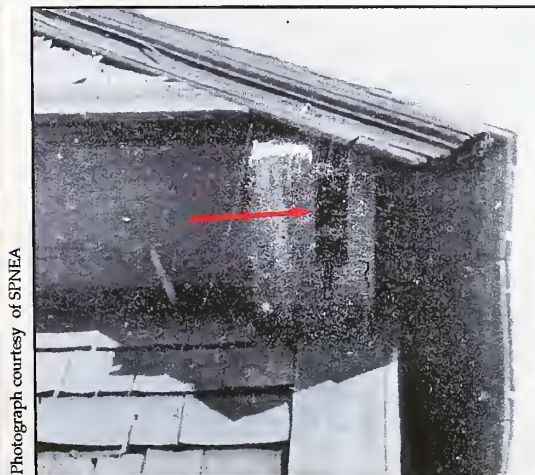


Photograph courtesy of SPNEA

2.5: 1913 photograph looking up at the west front chimney girt. The mortise and pin hole for the bracket tenon are clearly visible, although about an inch of the bottom of the girt is missing. This with the gain in the post is firm evidence for Dow's bracket restoration.



2.6: Existing pendent drop at the northeast corner of the attic gable overhang. Dow's added extension to the rear plate to support the verge board and drop is clearly visible (arrow).

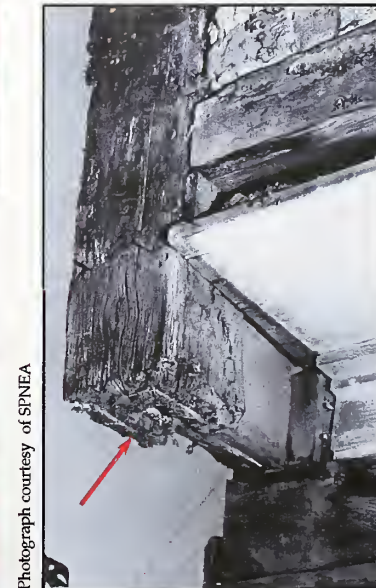


Photograph courtesy of SPNEA

2.7: 1913 photo of southwest gable corner showing old mortise for a drop or a bracket in the overhanging front plate, which has been cut back to install the 18th century rake boards flush to the facade of the attic gable. The presence or absence of a corresponding gain in corner post is the evidence needed to determine whether the original feature was a pendent drop as restored by Dow, or was a bracket as has been documented on Gleason house in Connecticut and the Indian House in Deerfield. Unfortunately there is no record of the appearance of the upper corner posts.



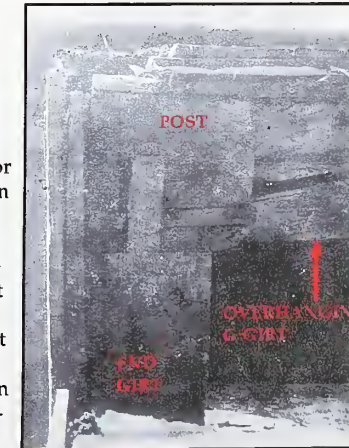
2.8: Existing pendent drop at the southeast corner of the front overhang. The extension of the original corner post to some 6" below the girt is clear in this photo (arrow marks joint to the restored drop)



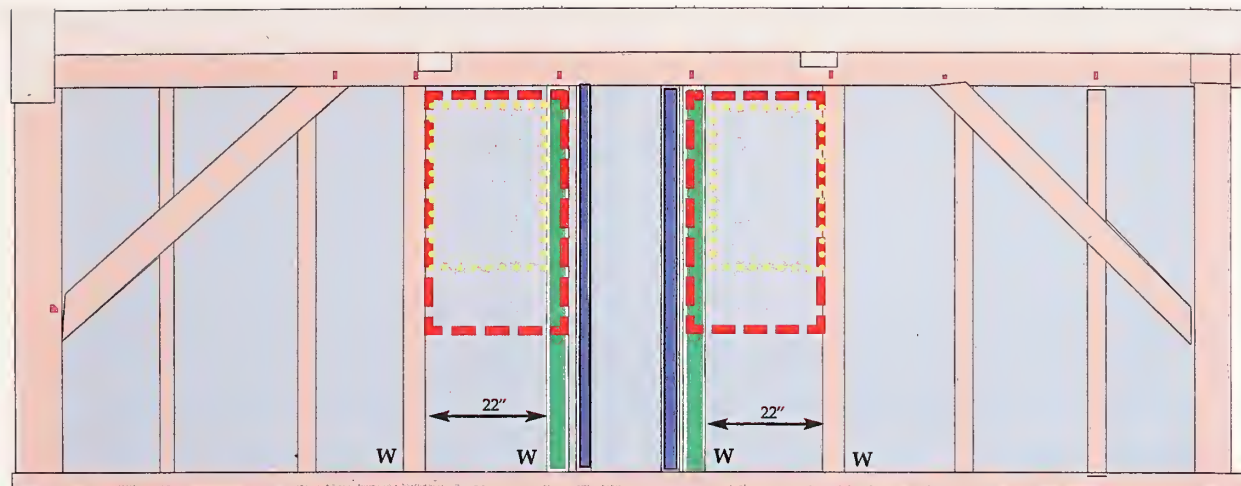
Photograph courtesy of SPNEA

2.9: Photo of Boardman house corner post at the front overhang showing the type of clear evidence on the underside of the post for a pendent drop that is lacking at the Capen House due to the place the posts were cut off.

2.10: 1913 photo of underside of the southwest end girt/corner post joint showing that any possible evidence for a pendent drop had been previously cut off along with the bottom inch of the end girt. The surviving projection of the east end corner post below the girt (see 2.8) makes it highly improbable there was a bracket rather than either a drop or no ornament at this location.



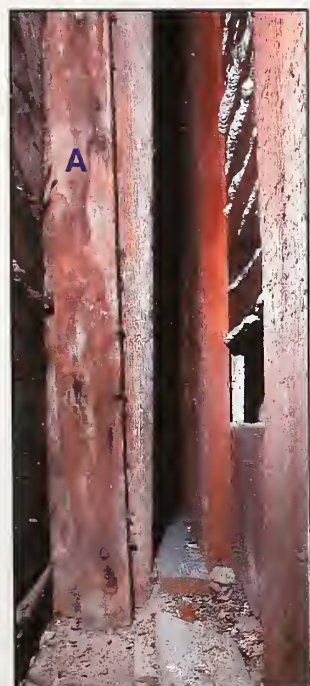
Photograph courtesy of SPNEA



3.1: Elevation of parlor front wall framing. Original members are shown in light brown or green. Placement is based on existing pins in the front girt, which are shown in red, and the 1913 photographs with the framing exposed. The two original studs removed in the 18th century to enlarge the windows are shown in green, and the studs that were added to replace them at that time are blue. Oversize studs measuring approximately 4" x 4" that projected into the room beyond the finish plaster face are labeled "W" to designate they likely framed original windows. Evidence for the assumption that the two studs removed in the 18th century were of this type is provided in 3.3 and 3.7 below. All other original studs are approximately 3 1/2" wide by 3" deep and were presumably covered with plaster. The existing 1913 casement windows are shown in red and are a few inches shorter and about 1" narrower than the 19th century windows they replaced. The yellow dotted line indicates a conjectural placement of the original windows. Their width is based on the original stud positions, but no evidence was found for their height. The front wall framing of the parlor chamber and the hall and hall chamber is essentially the same as the parlor.



3.2: Closeup of window in 3.6 below showing relationship of the pin for the missing original window stud to Dow's window.



3.3: Existing 4" deep oversize window stud in hall chamber wall. Note that a furring strip (A) has been nailed to its side with wrought nails to receive plaster lath which were nailed to it with wrought nails. The 3" thick wall cavity was originally filled with brick and clay nogging (see 5.6). This stud had a notch cut into it about 3" below Dow's window like the existing parlor stud in 3.5. It also has cut nails in its face for an early 19th century plaster wall 4" deep. The current late 19th century wall is about 7" deep.



3.4: Front wall of parlor showing the two remaining oversized studs that project beyond the plaster face. The pins for the two missing original studs are marked by arrows but do not show in the photo because of the white paint.

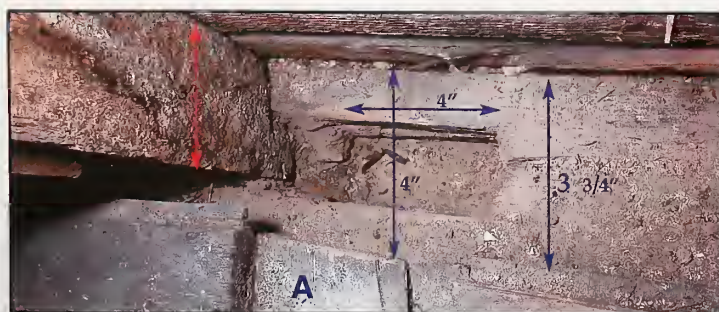


Photograph courtesy of SPNEA

3.5: 1913 photo showing the right hand window stud after removal of the 19th century window frame. The notch marked by the arrow was cut to accommodate the width and height of the 18/19th century window, and removed the limited evidence we found in the west wall window stud (4.3).



3.6: Hall front window showing location of original pins in girt in relation to the current window frame. The right hand stud had been cut back to hide it behind the plaster and accommodate the replacement window trim in the 18th or 19th century. Dow pieced it out to mimic the studs still visible in the parlor. Removal of the exterior sheathing at the pier to the left of this window revealed that the existing stud used to frame the left side of this window is fastened to an open gain cut in the face of the girt with a wrought nail, and thus likely dates to the 18th century.



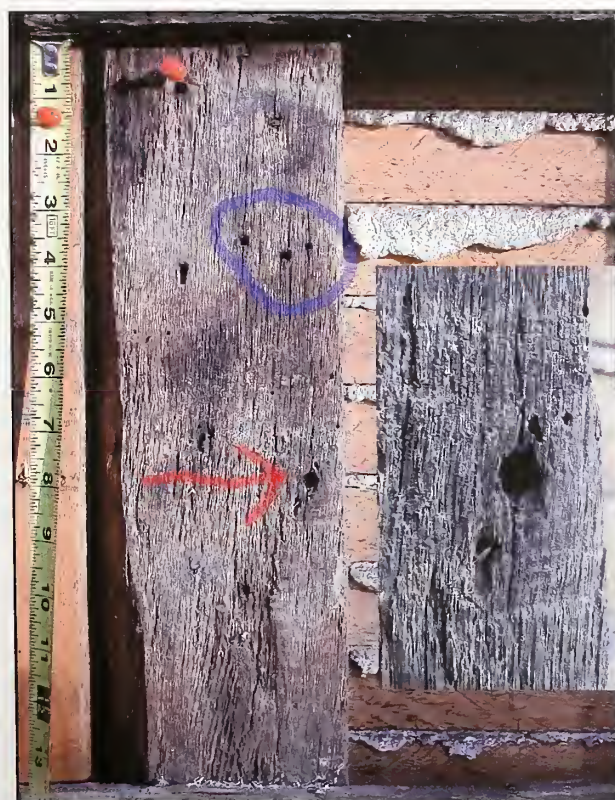
3.7: 4" wide Stud pocket in the overhanging front girt of the hall chamber for an original window stud that was enlarged to the left to accommodate the tenon for its 18th century replacement. the original floor board marked A is set back slightly from its neighbor making it just 4" from the sheathing. This and the 4" width of the mortise are the evidence that the stud was oversized.



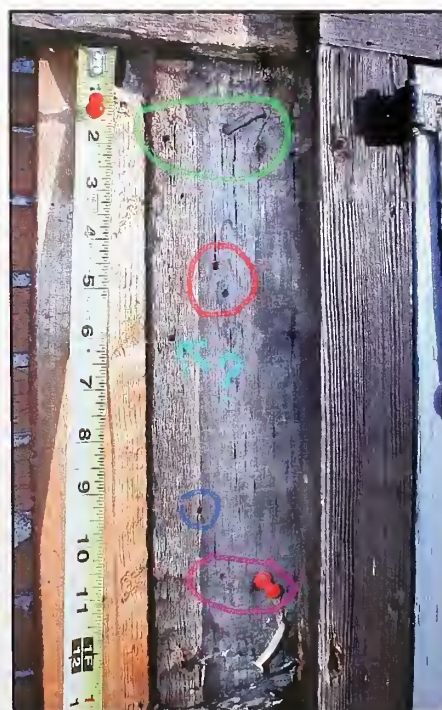
3.8: Hall chamber looking up at the underside of the roof plate between the 18th century window studs which are marked "A". There is no visible evidence that an original sash might have been in this bay. The tan stains are residue of brick and clay nogging, and the white line is whitewash residue at the face of the original plaster finish over the 3" thick nogging.



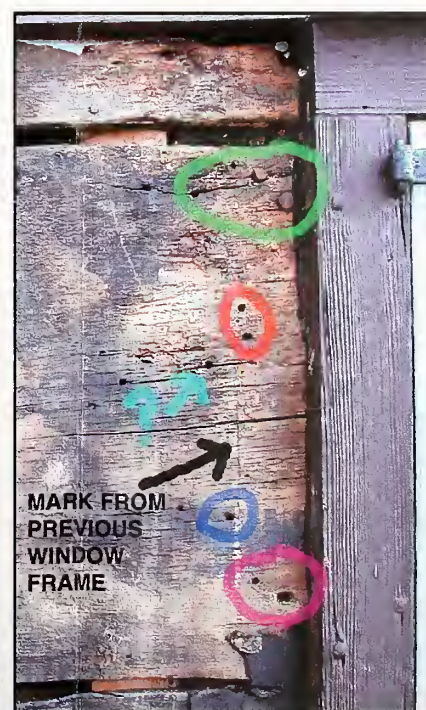
4.1: West first floor wall after removal of 18th century sheathing board showing early greyish colored studs with lath and light colored studs installed by Dow in the 1913 restoration. The early stud marked with the red arrow dates to the 18th century as explained in 4.4 and 4.5 below. The green "W" marks the original window stud shown in 4.3 below. The plain green circle marks the stud illustrating original clapboard evidence on Sheet 6 (see 6.1 and 6.2). The red push pins mark the position of holes from sheathing nails. Removal of one or two more sheathing boards to examine the lower portion of stud "W" is recommended to determine if there is similar evidence to the holes shown in 4.3 for a bottom pintle.



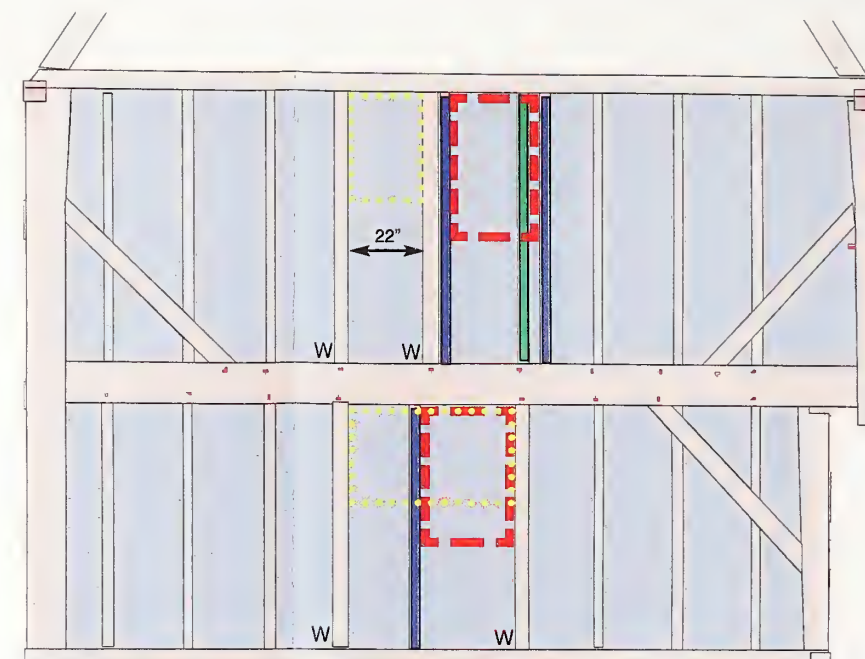
4.3: Original window stud at "W" in 4.1. Red arrow marks large hole possibly from a casement sash pintle (enlarged at right). Blue circle marks nail holes of unknown function, but possibly from a window header or trim. The red push pin marks the only nail coming through from the sheathing. The other unmarked holes are likely from the original clapboards. The notches cut in the front facade window studs would have removed any similar pintle evidence on those studs.



4.4: Stud added in 18th century with sheathing removed. Top of stud is secured in an open gain in the girt. All holes are from nails penetrating through the sheathing, in contrast to original studs that have clapboard nail holes not present in the sheathing.



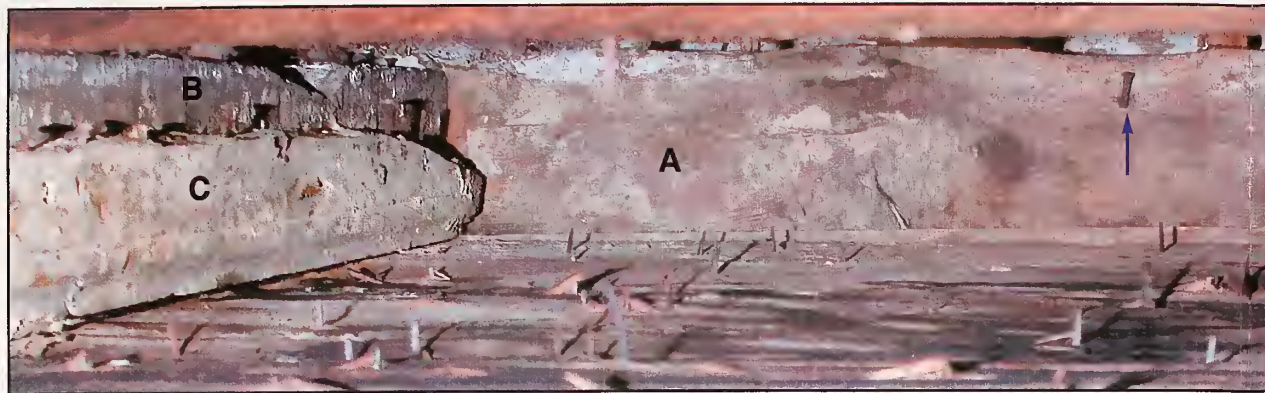
4.5: Sheathing board before removal from stud in 4.4. Matching color circles indicate alignment of nail holes in both photos. The large hole in the magenta circle was a wrought sheathing nail indicating the board was installed in the 18th century and was not removed by Dow.



4.2: Elevation of west end wall framing. Original members are shown in light brown or green. Placement is based on existing pins in the girt and posts, which are shown in red. Original studs removed in the 18th century for window changes are green, and the studs that were added at that time are blue. Oversize studs measuring approximately 4" x 4" that originally projected into the room beyond the finish plaster face are labeled "W" to designate they likely framed original windows. Evidence for the assumption that studs that are now 3" deep were originally of this type is provided on east wall sheet #5 (5.7). All other original studs are approximately 3 1/2" wide by 3" deep and were presumably covered with plaster. The existing 1913 casement windows are shown in red and are a few inches shorter and about 1" narrower than the 19th century windows they replaced. The yellow dotted line indicates a conjectural placement of the original windows. Their width is based on the original stud positions, but no evidence was found for their height. The window stud positions on the second floor are based solely on the evidence found in the east wall.

4.5 (right): Interior face of sheathing board. Red arrows mark alignment to studs, the left being the 18th century window stud in 4.4, the right being the original window stud in 4.3. The clay stains between the studs may indicate this bay was filled with new brick nogging when the original casement sash was removed and the sheathing added. None of the other bays have similar stains. The board is oak rather than pine.





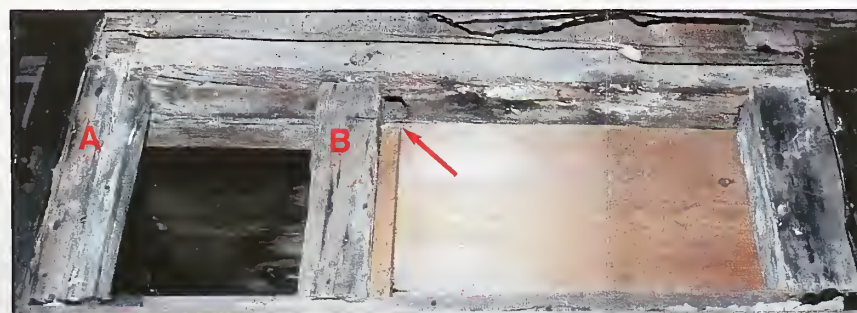
5.1: Location of original east end gable hall chamber window showing underside of attic girt (A) and the northerly window stud (B, W1 in 5.2). The evidence that this was originally a window bay is that the flanking studs are both 4" deep (see 5.4 below for the right hand stud) and that this bay was not originally plastered because the furring strip on the stud that received the lath and plaster is a reused piece of molded trim (C). The use wrought nails for the lath on the furring strip confirms the window was removed before c.1800. The function of the single nail in the girt (arrow) and the possibly related adjacent wear marks is not known. It is well left of the center of the bay.



5.4: 4" deep right hand (southerly) stud (W2 in 5.2) of original east end gable hall chamber window at baseboard level showing furring strip for original plaster with wrought lath nails (A), and whitewash on surfaces that were originally exposed in the room. The cut nails in front the face of the stud relate to early 19th century renovations that moved the plaster outwards to completely cover the all the studs. Later 19th century lath and plaster of existing interior wall are at extreme right.

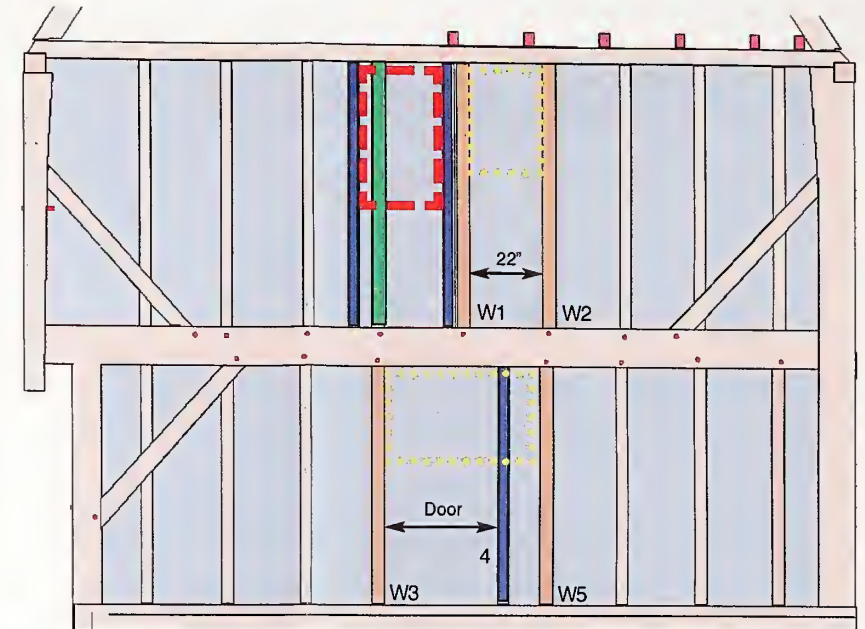


5.3: Top of door stud added in the 18th century (A in 5.5, #4 in 5.2). Tenon of stud (blue arrow) is fastened with a wrought nail (green circle) in a beveled gain (red arrow) cut into the outer face of the girt. Tenons of original studs are pinned in mortises cut in the underside of the girt.



5.5: Exterior face of studs and girt to the north of the east facade door with sheathing removed. Stud "A" (4 in 5.2) was added in the 18th century to frame the new door. Stud "B" (W5 in 5.2) is the original window stud. Its mortise is 4" wide (arrow), although the stud is only 3" wide. Its interior face has been cut back to the 3" plaster line (see 5.7), making it similar to other original window studs except for its width. Its right side does not show any signs of having been cut down.

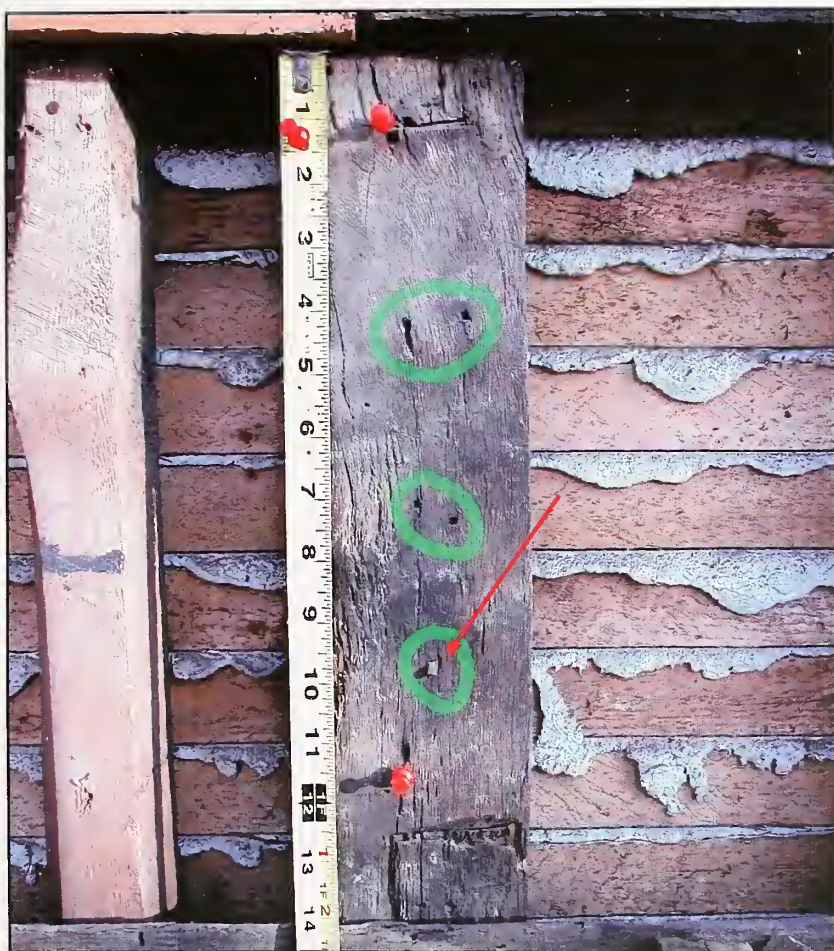
5.2: Elevation of east end wall framing. Original members are shown in light brown or green. Placement is based on existing pins in the girt and posts, which are shown in red. Original studs removed in the 18th century for window changes are shown in green, and the studs that were added at that time are blue. Oversize studs measuring approximately 4" x 4" that initially projected into the room beyond the finish plaster face are labeled "W" to designate they likely framed original windows. All other original studs are approximately 3 1/2" wide by 3" deep and were presumably covered with plaster. The existing 1913 casement windows are shown in red. The yellow dotted line indicates a conjectural placement of the original windows.



5.6: Window stud (B in 5.5, W5 in 5.2). The face of the stud is deeply eroded from about 6" down to 10" (Red line). Whether this erosion and the large nail holes (arrow) relate to the header of a casement window is highly speculative.



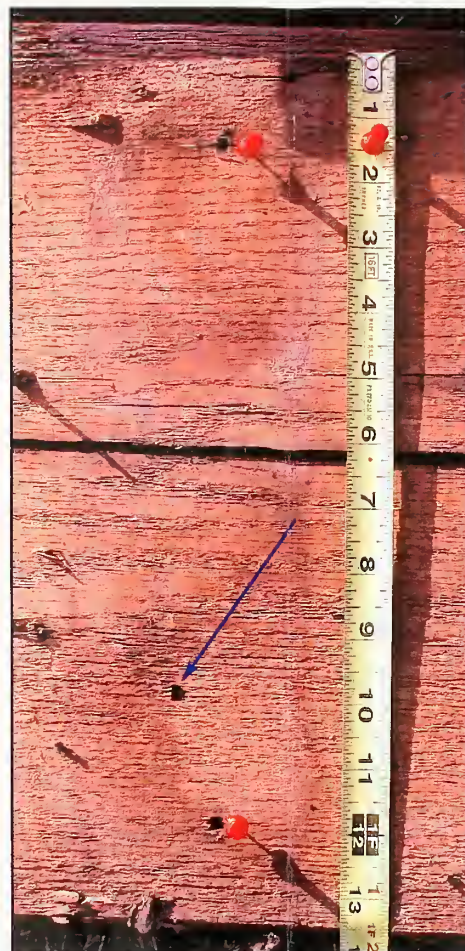
5.7: Window stud (B in 5.5) showing the fresher color of its interior face from being cut back to the 3" plaster line (red arrow), and new piece added by Dow to simulate its original depth (blue arrow). Also note erosion at front corner.



6.1: Evidence that original clapboards were installed directly on the studs revealed where 18th century sheathing was removed on west gable facade (see 4.1). Red pushpins mark nail holes that correspond to nails through the sheathing board. Green circles mark nail holes with no corresponding holes in the sheathing. Their vertical spacing is appropriate for clapboards. The circular saw marks on the relatively bright studs and lath installed by Dow are clearly visible.



6.4: Regular nailing and layout pattern of original oak clapboards applied directly to the studs without sheathing at the late 17th century Bridges House in North Andover. Had Dow been rigorously following the evidence on the Capen house he would have applied the restoration clapboards in a similar manner. Note that in a few 17th century examples the clapboard joints are aligned in straight vertical rows to the studs rather than being staggered.

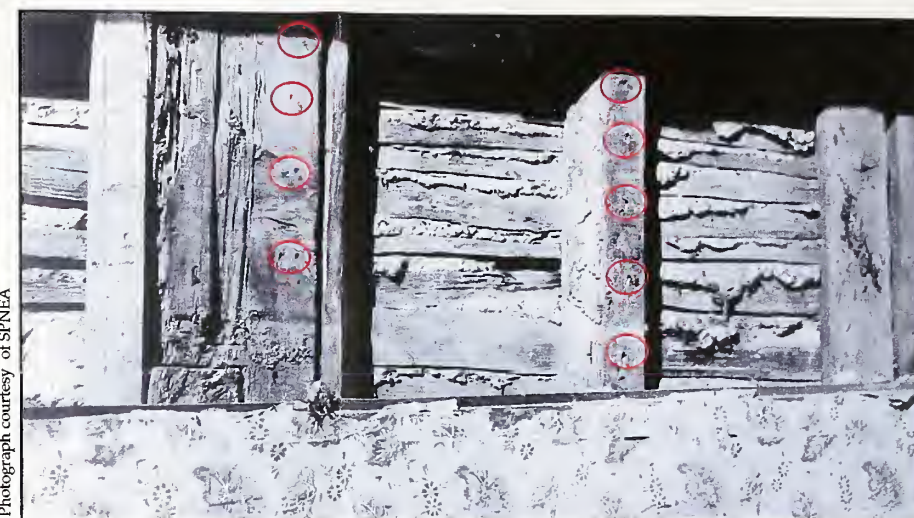


6.2: backside of 18th century sheathing board that aligned with the stud in 6.1. The red pushpins mark holes from the wrought nails that fastened the sheathing to the stud. The arrow points to a depression (not a hole clear through) from the broken off nail marked with a red arrow on the stud. The sheathing board is oak rather than pine. The shadow of the stud is clearly visible on the board.



6.5: Oak clapboards installed by Dow in 1913 on the west gable showing their random alignment relative to the placement of studs, which are marked by the green lines. As he was applying them over the sheathing boards, he inadvertently followed 18th century practice of nailing randomly to the sheathing rather than aligning the ends over the studs.

Photograph courtesy of SPNEA



6.3: 1913 photo of easterly chimney post at the front facade. Regularly spaced holes (red circles) possibly from original clapboard nails are visible on the post and the first stud on the right. (based on pin evidence this is an original stud). Riven lath still remain in place on the studs. Their date is unknown but probably 18th century. The brick nogging has been removed. A reused interior partition board has been applied as sheathing. It is not known if these are still in place behind the clapboards.



6.6: Photo of original brick and clay nogging still in place with oak clapboards applied directly to the studs at the late 17th century Bridges house in north Andover. The plaster lath in the lowest section is accordion lath applied in the early 19th century (probably the 1820's). The fragments of lath and plaster over the clapboards in the upper right are 18th century interior finishes applied after an addition was built in front of this wall in 1721.



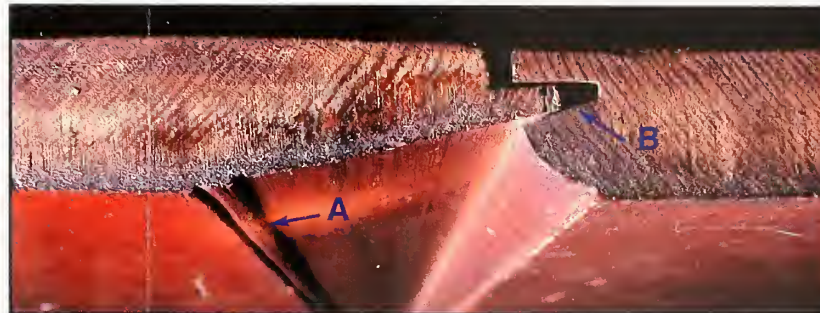
7.1: Southwest corner of Hall in 1913 after removal of later finishes and structural repairs. Appleton's note on the photo states that the vertical board sheathing marked "A" appears to be old but not original.



7.6 Southwest corner of Hall showing finishes installed by Dow. The feather edged vertical boards to the left of the fireplace replaced the old plain ones visible in 7.1. The plaster on the other walls was replaced with the same feather edged boards laid horizontally. The top board has been removed to expose the original framing that is also visible in the 1913 photo. The window stud (A) has been pieced out to match the ones in the parlor.



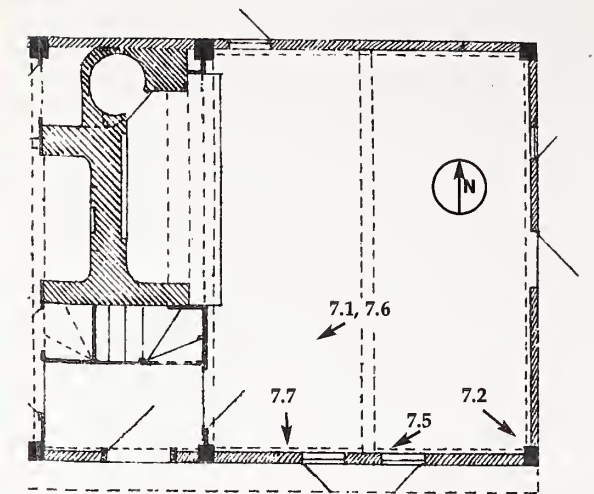
7.2: Southeast corner post showing detailing of the board sheathing installed by Dow as well as the T-headed cut nails used to install it. Remnants of 19th century oil paint and earlier whitewash survive on this post, which is largely obscured by the pewter cupboard. The pins marked "A" confirm there were braces on both sides of the corner



7.4: Cross section of feather edged sheathing used by Dow in hall, parlor, and stair hall. This general profile is characteristic of c. 1720's-70's sheathing rather than the 1680's. The small bead marked "A" is not usually present on this type of sheathing. The beveled shape of the groove (B) that receives the panel edge is a characteristic of modern joinery. In period work this would have been a simple rectangular groove formed with a standard plow plane. Dow had used identical sheathing in the Ward House restoration two years before with the same carpenter doing the woodwork using the same shaper blade to form the V groove.



7.7: Remnants of clay on the interior face of the brace marked with a blue circle in 7.6 suggest the original room finish may have been clay plaster rather than board sheathing. Definitive conclusions regarding early finishes would require exposing considerably more of the original framing.



7.3: Plan of hall showing photo locations.



7.5: Remnants of early whitewash finish remain on the south side of the last ceiling joist where its proximity to the south girt makes it hard to see. The fairly uniform area about 1" wide without paint where the joist enters the summer beam (marked A) provides speculative evidence that an early partition extended to the ceiling along the summer beam (see sheet #10 for other partition evidence). The white area at the bottom of the photo is the plaster on the nogging above the girt.

HALL FINISHES

Existing Fabric Notes

Parson Capen House, Topsfield, MA

Historic Structure Report

Finch&Rose

April 1, 2002



8.1: Front (south) wall. Piecing out of window studs (A) by Dow mimics the existing original studs in the Parlor (see 3.4). The low headroom under the summer beam was not intentional and is due to substantial settlement of the frame from long past deterioration. The summer beam is 6" lower at the rear wall than at the front wall, and several inches lower at the front wall relative to the chimney girt at the entry hall door. The white material above the front girt is plaster over the brick nogging filling the space between the top of the girt and the ceiling boards. The hard white plaster dates to Dow, but a small portion of original clay plaster remains exposed to the right of the summer beam (arrow). This is a typical first period detail that also present over the girts in the parlor and stairhall.



8.2: Rear (north) wall of hall. The post under the summer beam is a cosmetic board added by Dow (see 8.3). The rear girt sags downwards substantially to a low point at the summer beam due to 19th century sill deterioration. The new conventional studs and header used by Dow to reframe this wall are visible to the right of the window (arrow). The stains on the 1913 wall sheathing are from past leaks in the plumbing or the heating pipes overhead. The window is in an 18/19th century opening in the probable location of an original brace, or possibly a rear door (Dow's framing obscures any remaining evidence).



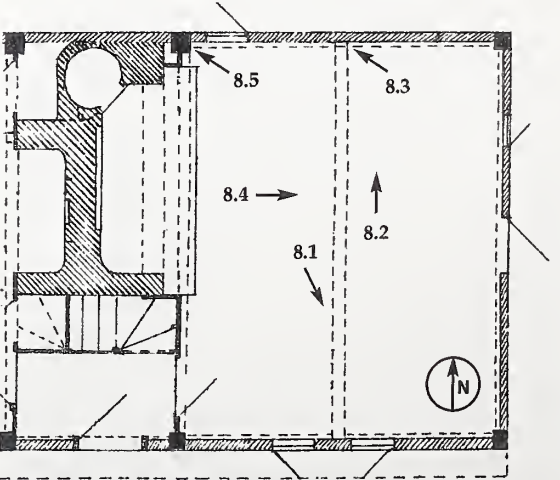
8.3: Detail of rear "post" under summer beam. Presumably Dow installed it based on the two pin holes above it (blue arrows) and the similar feature in the Parlor. The right pin hole is clearly old from the condition of the surrounding wood, but the age of the left one is not evident. The function and age of the empty hole to the right of the summer beam (red arrow) is unknown. The upper one is probably for a 2nd floor stud.



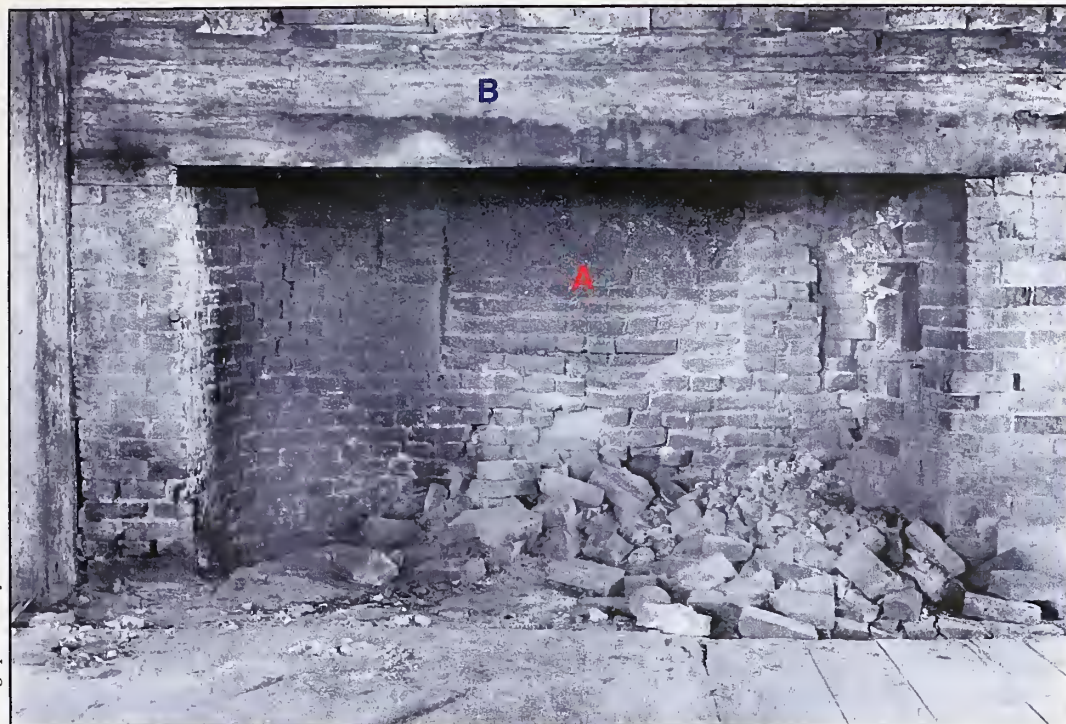
8.4: West wall. Studs marked "A" have been pieced out by Dow to extend into the room similar to the window studs in the Parlor. They likely were original window studs framing a two bay casement window. The door is a Dow reproduction in the location of a door added in the 18th century. "B" marks an area of old rot in the end girt repaired by Dow. The end girt slopes downward towards the rear wall due to 19th century deterioration of the sills. The wall sheathing at "C" was removed to examine the studs.



8.5: Northwest corner post. The rear girt and joist above it have pulled out of their mortises about 1". The joint between the floorboards above (arrow) reflects similar past movement. The joist is probably bearing on the brick nogging behind the plaster below it. The detailing of the joint of the chimney girt to the post is the same at all four rear posts.



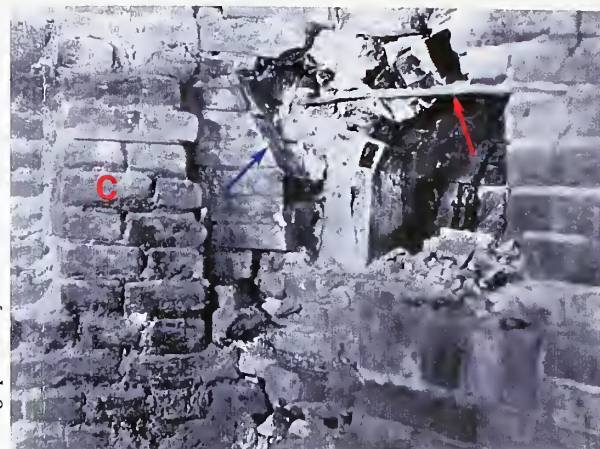
8.6 Plan of hall showing photo locations.



9.1: Hall fireplace in 1913 as revealed by removal of later infill material. Note rear inset panel (marked A), curved back corners, and coverboard over lintel (marked B). Appleton's notes on the photo stated the oven appeared to be of later construction (see 9.3).



9.4: Current appearance of hall fireplace. The overall design with curved corners and inset rear panel is substantiated by the 1913 photo. The main left pier and left back corner, the small pier to the left of the oven (C), and the lintel coverboard (B) are largely original material with remaining traces of the original clay mortar. The right side is largely rebuilt. The application of grey cement parging to the inset panel and adjoining piers is recent.

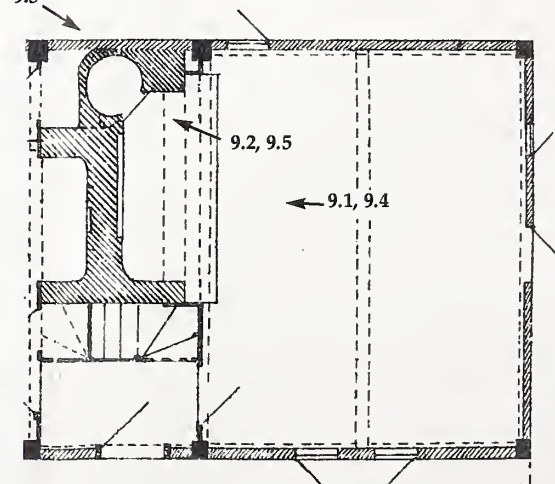


9.2: Bake oven in 1913 after removal of some face brick associated with the later rebuilding of the oven. Appleton's notes indicated the brickwork at the left jamb (blue arrow) was a remnant that formed the spring of the arch of the original bake oven. This provided the evidence for both the position of the original oven, and the layout of its arch. The horizontal piece (red arrow) was the iron lintel for the later bake oven. The eroded mortar in the pier on the left side (C) appears to be the original clay, whereas the masonry at the right side of the oven is lime based.



9.3: 1913 photo of the rear of the hall fireplace as visible from the back of the building after the sheathing and framing of the chimney bay had been removed. One can clearly see in this photo that most of the visible mortar is lime based rather than the original clay (note how it oozes out of the joints at the left side (arrow), which clay does not do).

9.3



9.6: Plan of hall.



9.5: Bake oven as reconstructed by Dow following the evidence visible noted in 9.2 above. The pier to the left of the oven (marked C) retains its original brick and some exposed early clay mortar. Note that Dow used a grey Portland cement mortar for all his rebuilding and repair work. Although this makes it easy to distinguish his work from the original clay mortar, it is too strong in relation to the weak original mortar and brick, and visually unattractive. More recent repairs have also been done with grey portland cement.



10.1: Hall summer beam showing variations in surface color that may reflect former partitions and room treatments. The line of the 19th century ceiling located on the underside of the joists is clearly visible at the left end of the summer beam (marked with blue arrow). The darker area probably had multiple coats of oil paint, while the light upper area above the joist line had only early whitewash. The relatively light section of the beam at the right side roughly coincides with the small northeast room labeled CC on 10.6 (dotted line marks partition), and may indicate that the room was always whitewashed. What the short dark section at the extreme right end (green arrow) indicates is not clear. Paint shadows on the floor (arrow A) and the adjacent cut line in floor boards arrow C) align to this face of the summer beam. Arrow B marks the paint shadow of the partition between rooms BB and CC.



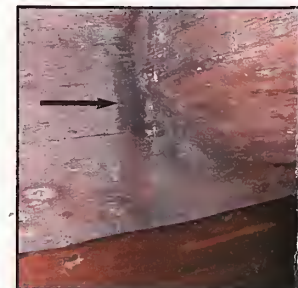
10.7: Hall floor showing paint shadow from former partitions (marked A and B), heavy wear pattern presumably from exterior door to a door into the kitchen (red arrow), and junction between two sets of floor boards aligning with former partition (blue arrow C).



10.2: Hall ceiling joists showing uniform plaster burn (white lines) and nailing pattern from mill sawn 19th century lath. This indicates the first plaster ceiling was not installed until c. the 1830s or later. The uniform white paint lines adjacent to the summer beam (arrows) suggests the room partition predates the plaster ceiling.



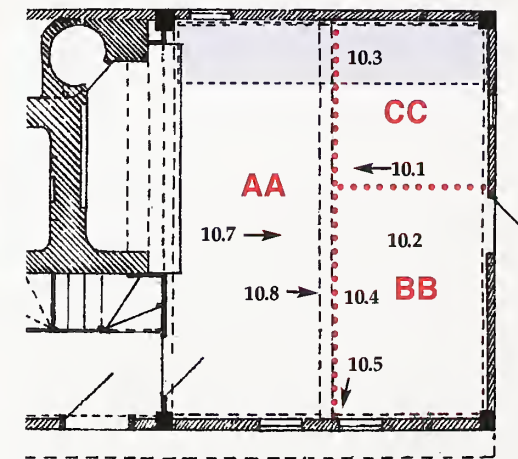
10.4: Closeup of white paint line on ceiling boards next to summer beam that may reflect the line of a former board partition. The wood color is slightly lighter on the beam side of the line.



10.5: Paint shadow on front girt next to summer beam is further evidence of an early board partition.



10.3: The boards in the last (i.e., north) bay of the ceiling (arrows) are short pieces suggesting some unknown past repair or alteration. The other boards span the entire room.



10.6 Plan of hall with photo locations. Dotted red line indicates partitions removed by Dow. Paint lines on the ceiling boards (see 10.2 and 10.4) suggest the partitions go back to the 18th century before the plaster ceiling was installed. However, the presence of whitewash remnants on the top beveled surface of the summer beam that would have been covered by the partition suggest that the partition was not an original feature. The rooms marked BB and CC were probably kitchen service spaces. The floor boards in the blue area were replaced by Dow. The age of the remaining floor boards is unknown, but likely not original. The subflooring boards extend the full width of the hall, while the finish boards are cut at the partition line.



10.8: Close up of paint shadows relating to former hall partition. The very heavy wear marked D probably indicates the former door location. Remnants of multiple layers of yellow ochre paint on the floor are clearly visible along the partition line (arrows). The meaning of the rectangular paint indentation marked B is not clear. While similar yellow ochre paint remnants are present on both sides of the cut line, most specific patches of paint do not lap across the cut line. This suggests the cut reflects a repair with the boards on the fireplace side being old replacement boards (they also show areas of heavy wear). Most visible nails appear to be cut rather than wrought, but none were pulled to verify their type.

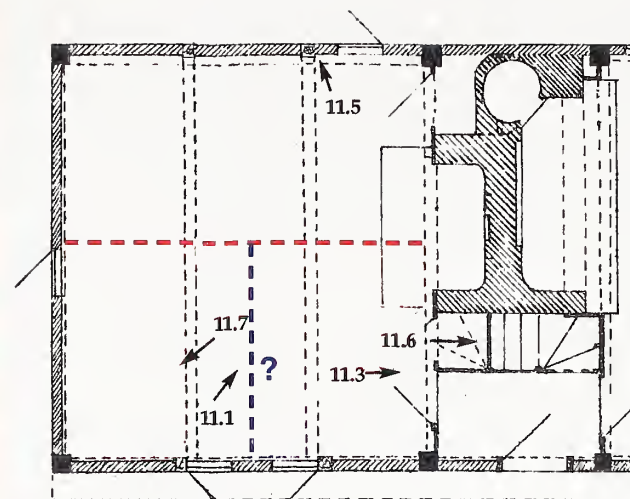


11.1: Current appearance of hall north and west walls. The original floorboards were replaced by Dow in 1913 along with a new fireplace hearth. The vertical feather edged sheathing and doors flanking the fireplace are Dow's replacement of the woodwork and plaster he uncovered in 1913 (see 11.3, 12.1), and match the woodwork in the hall and entry. The board at A is a restoration by Dow (see 11.5). The window is unlikely to be in an original location, as windows were not usually placed in the north wall and it conflicts with the probable location of a stud or brace. The section of the rear girt marked B above the window appears to be a very old repair that has removed the visible pin evidence for original framing in this area.

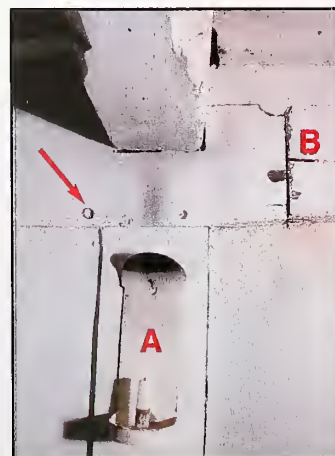


Photograph courtesy of SPNEA

11.4: Parlor shortly after completion of the restoration in 1913. About the only difference with its current appearance is the presence of paint on the fireplace lintel coverboard and the lighter appearance of the wood sheathing flanking the fireplace. The diamond shapes on the coverboard are probably tin sconces. Dow did not strip the paint from the ceiling as he did in the hall. The beams below the former ceiling line retain their full paint history, and fragments of earlier whitewash remain above the plaster line under the modern paint.



11.2: Plan of Parlor. Dashed red line indicates former 19th century partition based on paint lines on chimney girt in 1913 photo (see 12.1) and still visible as shadows on the chimney girt and east early summer beam. Paint shadows were not found on the west end girt, however. The blue dashed line is the conjectural location of another 19th century partition based on an 1894 newspaper article that stated there were then six rooms within the two first floor rooms. No paint shadows were found to locate this partition, but the late 19th century window locations make this the most logical location.

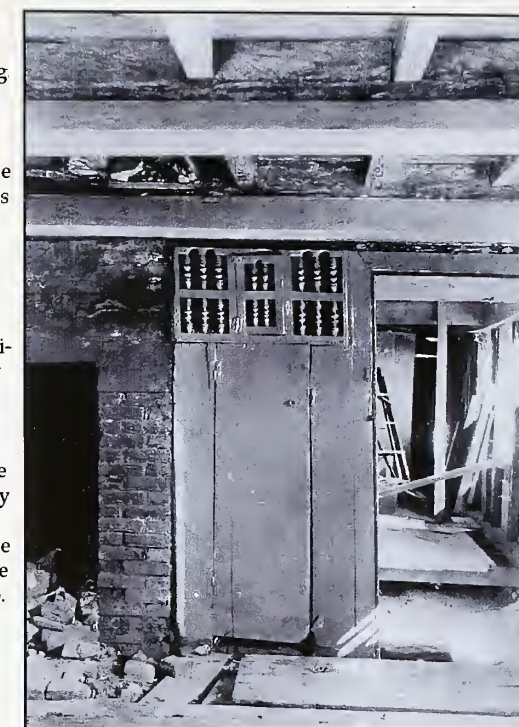


11.5: Detail of north wall showing post restored by Dow (A) based on pin evidence and the similar original posts in the parlor chamber. Dow neatly aligned the post to the summer beam rather than the slightly off-center pins (arrow), and used a 1" thick board to not interfere with the new wall framing (see sheet 17 for new framing). The line at B marks the start of an old girt repair.



11.6: Lath and plaster at rear of parlor closet under stairs. lath are oak (possibly reused portions of original clapboards) attached with wrought nails. The plaster is lime based rather than clay. As clay appears to have been used for original plaster (see parlor chamber; 14.2 and 14.3), this installation is likely 18th century rather than original.

11.3: 1913 photo looking from parlor through entry into the hall beyond showing the plain, unmolded board sheathing and trim replaced by Dow with feather edge sheathing. The location of the 19th century plaster ceiling is obvious from the paint on the summer beams. The photo also shows the extent of whitewash fragments remaining above the plaster ceiling and the as found position of the first period livery cupboard facing. Note the stair hall floor is entirely removed showing the high level of the dirt below it. The original framing for the entry floor was probably sleepers laid directly in the soil. These eventually rotted causing the floor level to gradually drop. Dow apparently rebuilt the entry floor and staircase at the level he found rather than raising it to match the adjacent rooms.



Photograph courtesy of SPNEA



Photograph courtesy of SPNEA

11.7: Southwest corner of parlor in 1913 following completion of structural repairs showing oversized original window studs at extreme left and right sides (A), several new studs introduced by Dow (B), and new sills. Note wallpaper on late 18th or 19th century interior board partitions reused by Dow for wall sheathing and subflooring.

PARLOR
Existing Fabric Notes
Parson Capen House, Topsfield, MA
Historic Structure Report
Finch & Rose

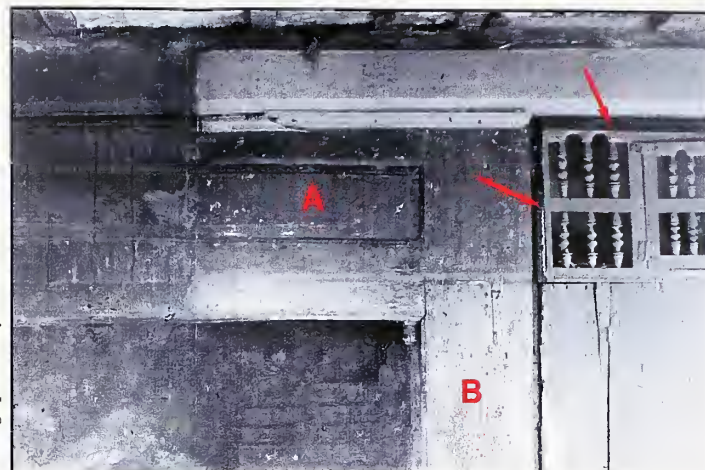
April 1, 2002



12.1: Parlor fireplace in 1913 as revealed by removal of later infill material and 18th century panel and jambs (12.2). Note rear inset panel (A), curved back corners, and coverboard over lintel (B). Appleton's notes on the photo stated the oven and wood work below the turned work are not original construction. The change in paint color on the chimney girt (blue arrow) is from a 19th century partition. The continuous vertical joint in the bricks at the lower left side of the left pier (red arrow) verifies that this was the limit of the original fireplace.



12.5: Current appearance of parlor fireplace. The overall design with curved corners and inset rear panel is substantiated by the 1913 photo. The right pier, right back corner, and the lintel coverboard are largely original material with remaining traces of the original clay mortar. The left side is largely rebuilt. The application of grey cement parging to the inset panel and adjoining piers is a recent treatment, perhaps in 1972.



12.2: Parlor fireplace in 1913 before the removal of 18th century panel (A) and jamb covers (B). The woodwork with turnings is described by Appleton as a hanging cupboard. The paint lines around its edges where moldings have been removed (arrows) suggest it had been in this position since the 18th century.



12.4: Original tan colored clay mortar indicates this pier is the original construction. The cement parging above the brick (red arrow) is modern. The spalled (i.e., eroded) brick face (arrow) is due to a combination of the soft underburnt early brick and dampness rising up in the masonry from the basement. Unfortunately the spalling is nearly impossible to stop, but its progress can be slowed by drying out the basement.



12.6: Interior of chimney stack. Cement parging has been applied over the brick well up into the second floor, probably in 1972. The unparged soot covered bricks are in the attic, while the section above the brick marked A is above the roof line and was rebuilt in 1913.



12.3: Fireplace brickwork viewed from the rear of the chimney bay in 1913 before restoration. The brickwork at the left is from the hall fireplace. The mound in the center (A) is bake oven in the parlor fireplace. The flat panel on the right (B) is the obviously later brick on the side of the fireplace that is plastered over in 12.1. The disjunction of oven brickwork to the panel and mortar that appears to be lime rather than clay support Appleton's observation that this was a later addition to the parlor fireplace. Also note the condition of the base of the chimney post, which has since been ended out.



12.7: Chimney bay looking at north exterior wall with replacement studs and reconstructed hall bake oven installed by Dow in 1913.

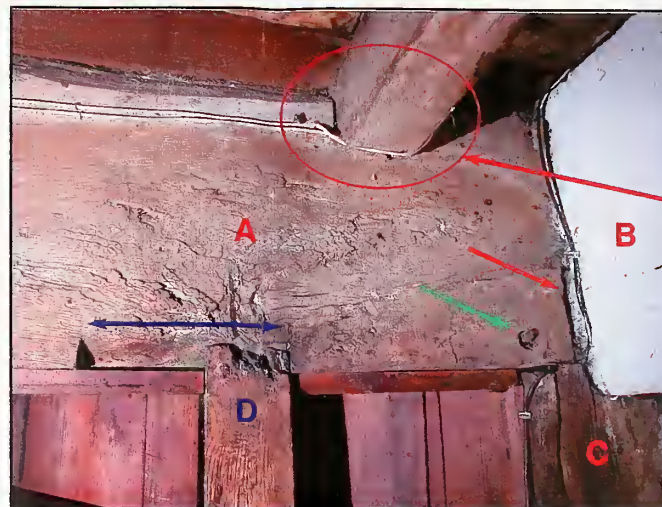


13.1: Current appearance of the stair. Remaining original elements are limited to the the newel post, balusters with top and bottom rails, the mantel tree from the hall fireplace lintel (A), the chimney brick, and the framing set against the brick (B) to support the second level stair above. The stair treads and risers were reconfigured in 1913, and all the board sheathing also dates to 1913.



13.4: 1913 photo of stairs after existing later finishes had been removed. Comparing the tread positions in this photo with 13.1 shows that Dow reconfigured the stair treads. The 1894 newspaper article describing the house indicates the bricks were exposed at that time.

Photograph courtesy of SPNEA



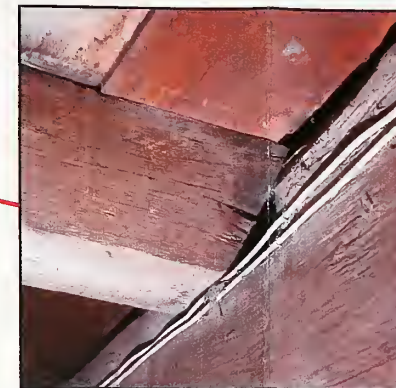
13.2: Junction of west chimney girt (A) to lower front girt (B) and chimney post (C) in first floor stair hall. Dow has placed a stud for the door jamb in an old gain (blue arrow) for a much wider member. There is a similar old wide gain at the jamb for the other side of the hall door. These gains are the only surviving evidence observed in the lower stair hall for early framing and finishes. Note the half-lap joint of the chimney girt passing over the front girt (red arrow), and the pin for the tenon from the post (green arrow). The closeness of the pin to the edge of the post suggests some of the post may have been shaved off. The east chimney post is concealed behind modern casing added by Dow to conceal the heating pipes.



13.5: An example of a similar bladed scarf joint in the roof plate of an 18th century barn showing the pattern of the blade overlaps.



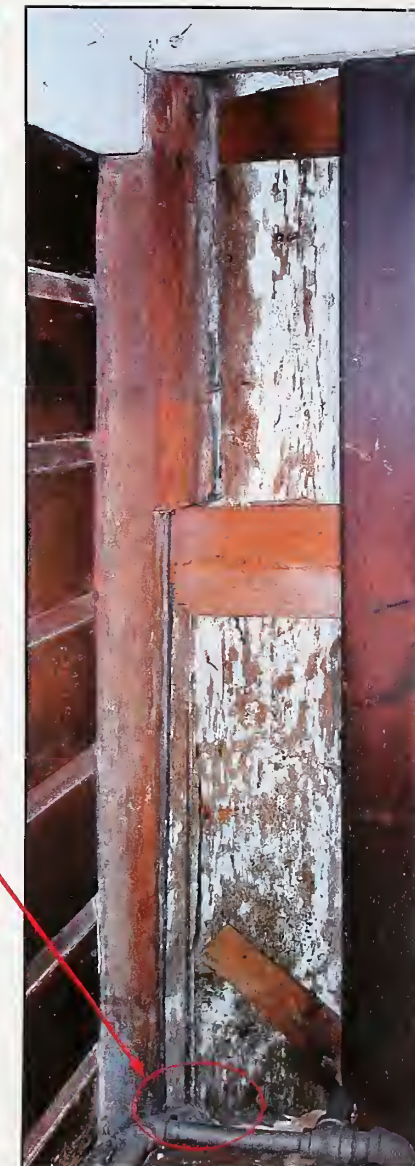
13.7: Front roof plate in second floor stair hall showing original bladed scarf joint (arrow) with its pins marked with green dots, and the pins for wall studs marked with red dots. The pin over the center of the window makes it clear the current window does not reflect the size or position of any original window in this space. A similar scarf joint is present in the rear plate, but a 19th century cover board makes it impossible to confirm the pin pattern. The front overhanging girt also once had a scarf joint in the chimney bay that has been removed by repairs.



13.3: Joists at first floor stair hall ceiling are loosely fitted to diagonal gains in the chimney girts. This is an unusual detail and would appear to be structurally weak, but the floor above does not exhibit unusual deflection. The second floor ceiling joists have similar joints.



13.6: Unusual triangular shaped spline (marked A) at the base of the second floor chimney post (marked B). It is fitted into gains in both the post and the top of the chimney girt and appears to be pinned to both to function as an original reinforcement for the joint between the post, chimney girt, and overhanging front girt. A similar spline is present at the base of the west chimney post in the hall chamber.



13.8: Dow's board sheathing removed at second floor east chimney post to reveal old whitewashed sheathing board scribed to the post. Whether this is a reused piece installed by Dow as a filler or is a previous finish is unclear and warrants further investigation. Based on the 1913 photos this seems characteristic of the early finishes found by Dow.



14.1: Summer beam showing paint shadow marking position of former 19th century partition.



14.4: Top of post B in 14.7 showing pins in rear plate (arrows) confirming that the post is original. Compare with the post in 11.5 cosmetically reconstructed by Dow.



14.5: Abruptly cut post shoulder (arrow) is identical on all four front posts suggesting the cut is the original detailing.



14.7: North wall of parlor chamber. Posts marked "A" and "B" are original based on pins at top and are about 4" thick. The angle of post B and the corner post at C are due to pre-Dow structural movement of the north wall, and appear to have been stable since 1913. Windows do not reflect original window position and size as they conflict with original stud and brace locations. Their placement is in the 18th/19th century window openings present in 1913. The wall was not opened to examine the studs for evidence of original windows. Arrows point to scars in the ceiling plaster marking the position of the former 19th century partition.



14.2: Original floorboard in attic eaves removed to reveal lath and clay plaster (arrow) applied to underside of flooring to form original ceiling of the parlor chamber. This is unusual. The hall chamber has the more normal treatment of whitewash applied directly to the underside of the attic floor boards.



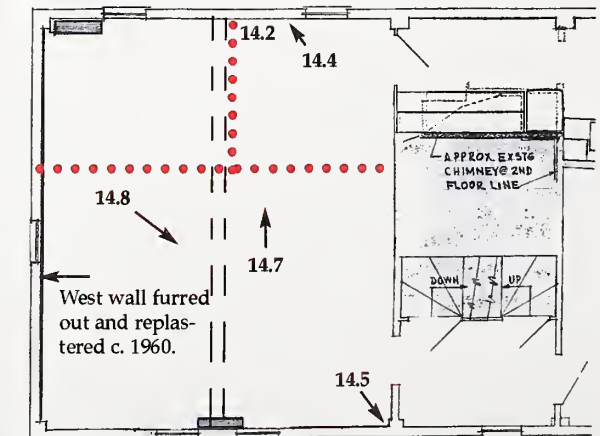
14.6: Underside of floor board showing stains from clay plaster. The lack of any whitewash on the board and generally uniform oxidized color of the wood suggests the clay plaster was the original ceiling treatment.



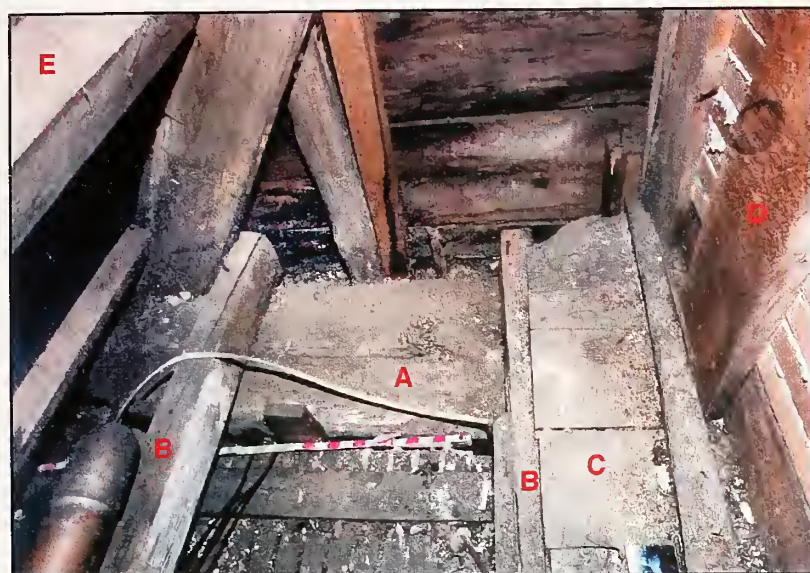
14.8: West and south walls of parlor chamber. Plaster of walls and ceiling is circular sawn lath probably from 2nd half of 19th century. The remaining original 4" deep window studs on the south (dotted blue line) and west walls have been cut back to match the other 3" deep studs to allow uninterrupted plaster. According to a memo by Pierce in 1972 the area of the original fireplace (marked by red circle) was opened up and found to contain a straight sided firebox with no obvious evidence of how it was finished. The cover board at the front and rear roof plates (arrow) likely dates to the 19th century installation of the plaster ceiling. This area originally would have been filled with nogging like the parlor below.



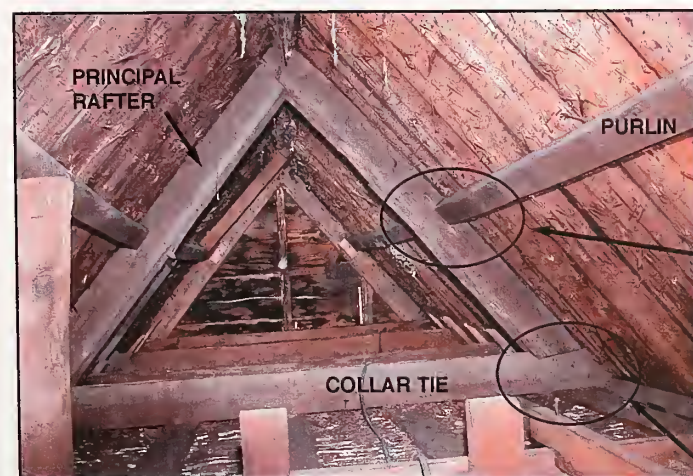
14.3: Close up of clay plaster. Note early white wash present on ceiling joist (marked A) and side of summer beam (marked B). Lath of current plaster ceiling (marked C) are visible below the joist. These predate Dow but are circular sawn. The lath for the clay plaster are riven and quite widely spaced. In contrast to the parlor closet oak lath, these appear to be pine.



14.9: Plan of parlor chamber. Dotted red line indicates 19th century partitions removed by Dow.



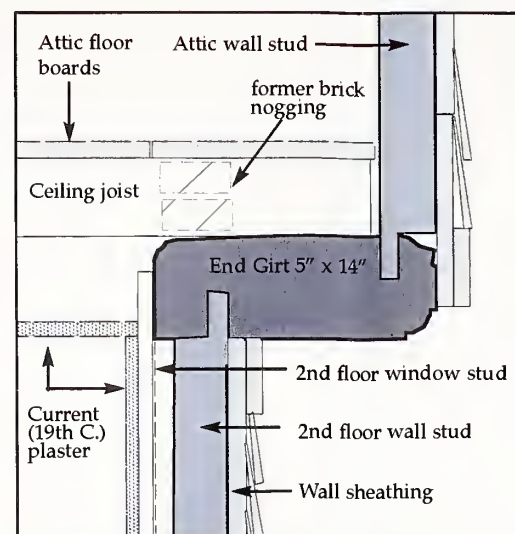
15.1: Overhanging east end girt (marked A) at end of north crawl space. Floor joists are marked B, and attic floorboards are C. Note the early whitewash finish on the joist. this was also present on the underside of the floorboards. D indicates framing and lath for the east attic room. E marks an original roof purlin. See 15.2 for drawing of end girt.



15.5: Upper attic looking east above ceiling of east attic room.



15.9: Detail of rafters at ridge showing raising numbers "V."



15.2: Section through overhanging east end girt.



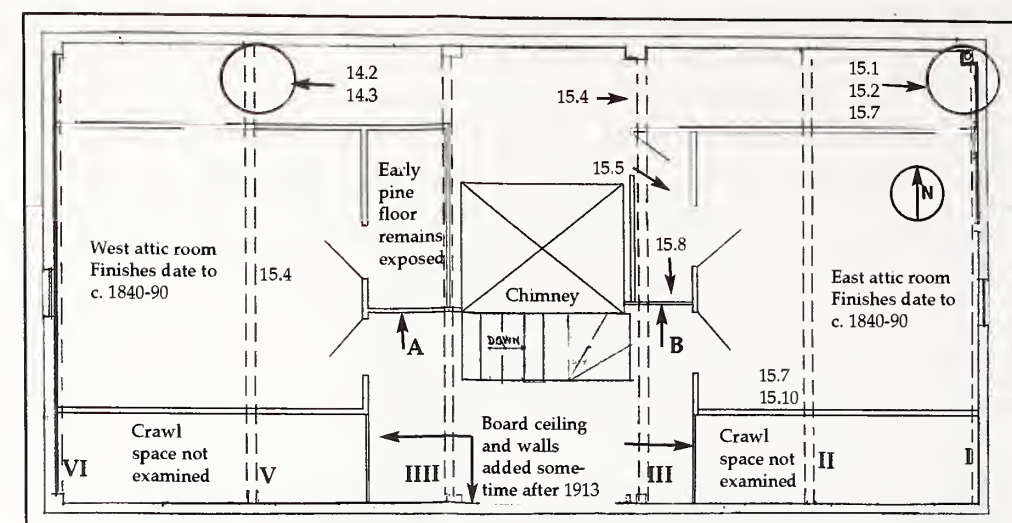
15.4: Unusual purlin joint at rafters III and IIII housing purlin tenon in a closed mortise (arrow) rather than an open gain.



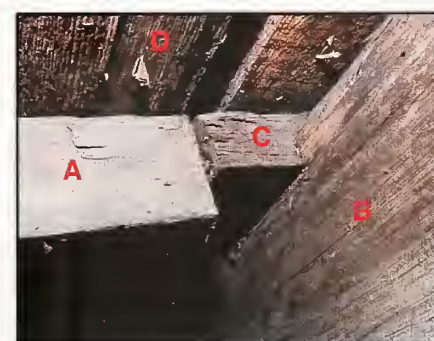
15.6: More normal purlin joint at rafters I, II, V and VI housing purlin tenon in an open gain. Arrow points to gain.



15.10: Detail of half-dovetail joint of collar tie to rafter.



15.3: Attic plan. Dashed lines indicate position of roof frame principal rafter bents. Roman numerals next to rafters indicate the frame raising numbers on them (only # II, III, and V were observed). Partitions in stair hall marked A and B are reused early 19th century beaded sheathing boards that were probably installed in their current positions before 1913. Lath for the two attic rooms and adjacent closets are uniform dimension and circular sawn, indicating they are post c. 1840. Like the furring for the second floor plaster, the studs and ceiling joists for the lath are irregular and not circular sawn in contrast to the studs used by Dow in the west parlor wall. A newspaper article of 1894 describes the attic as having two rooms finished with plaster. The attic room finishes therefore likely date to c. 1840-90. The floors may have been updated by Dow with the current strip flooring.



15.7: Unusual condition of purlin at east end rafter #1. Original purlin (A) has been cut short of the rafter (B) and a separate piece (C) installed in the original rafter gain. The new piece extends about 6" beyond the rafter to the restored verge boards. The original purlin extensions were cut off at the exterior face of the rafter in the 18th century when the verge boards were removed. There is no apparent connection between the original purlin and the added piece, which leaves the primary purlin end supported by the roof sheathing (D) nailed to it rather than the rafter. Presumably Dow did this to all the purlins and the end rafters. No signs of distress were observed related to this. Perhaps the side walls of the attic rooms have picked up the loads from the roof sheathing.



15.8: back side of board partition wall B from inside of closet. The different paint colors on the boards confirm they were reused from another location. The left hand stud is an unused door jamb. This type of jamb was not used in any of Dow's work, but might have been left over from the post 1840 renovations of the second floor rooms. Some other pieces of similar millwork are visible amongst the framing for the larger attic rooms. Such evidence supports the likelihood that most of the second and third floor plaster pre-dates 1913.



16.1: West (parlor) basement looking towards chimney foundation and north walls. Summer beam marked A is original with modern ledgers added to reinforce the joist support. Posts are modern additions. The beam marked B is an early timber being used to support the outer portion of the fireplace hearth above. Whether it is a piece reused by Dow or an original timber is not known. Most of the joists visible in the picture are replacements that have still newer members sistered to them. Subflooring includes 19th century sheathing reused by Dow from former partitions. The jumble of materials on the dirt floor need to be sorted with collections materials and old wood fragments from the house placed in proper storage, and the other materials thrown out.



16.2: Fragment of 19th century wallpaper on beaded wall board reused as parlor sub-flooring by Dow.



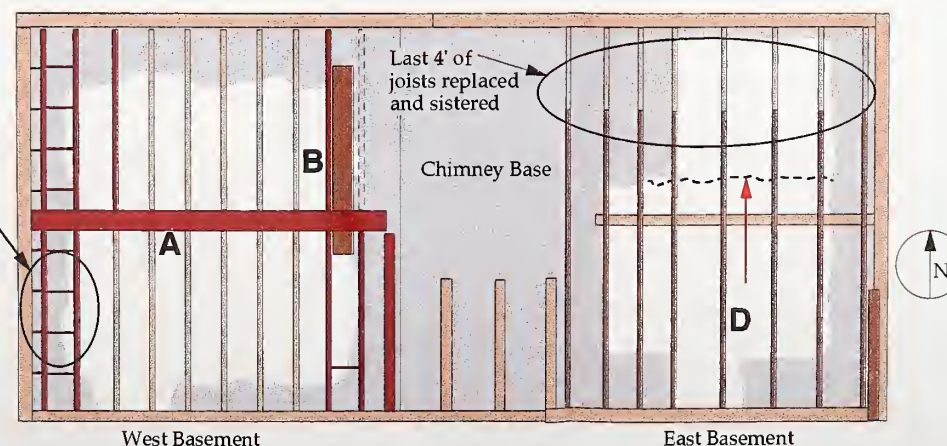
16.3: Substantial areas of clay and straw parging surviving on west basement west foundation wall suggest the entire basement was originally finished with clay parging.



16.4: East (hall) basement looking at fireplace foundation. This was a half basement until the mid 20th century when the rear section was dug out, the fireplace foundation retained by a new cement block wall, most of the foundation pointed with cement mortar, and a cement floor added. The return of the stone wall marked with an arrow was the original back wall of this cellar. The existing joists are vertically sawn and of unknown age, but probably not original. The center beam is a 20th century addition.



16.5: Original joist (marked C) in west basement with the only remaining bay of original floor insulation composed of clay and chopped straw supported by unused original oak clapboards carried by wood rungs spanning between joists. This is important both as the only known example of this treatment and because the oak clapboards are probably representative of the original exterior clapboards. Both Appleton and Donald Millar commented on the survival of this treatment. The remaining pieces are very important to preserve in situ. The dark wood next to the original joist is a modern sister joist.



16.6: Plan of east and west basements showing first floor framing members color coded to indicate age. Modern sister joists are not shown. The grey areas are masonry foundation walls. The dashed line indicated by the arrow marks the rear wall of the east basement previous to c. 1950s.



16.7: Hall sub-flooring at the front wall of the basement. The sub-floor boards are continuous across the width of the hall whereas the finish floor boards have a continuous joint aligned over the joist marked D. The subfloor is old vertically sawn boards, but, like the joists, probably not original. The sill at B is a modern replacement. All of the joists have been spliced with new wood in the last four feet towards the north wall.



17.2: Old repair to girt with let in timber.

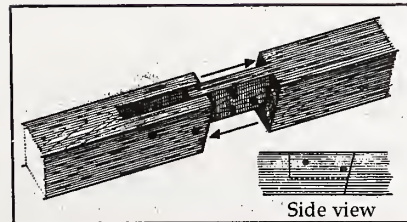


17.1: Overhanging girt heavily rotted out over summer beam from water leaking down window stud. Damage appears to be old and wall is currently stable with loads being transmitted by other members to wall below. Refer to Ocmulgee Assoc. letter report in Appendix for analysis of this and related structural issues.



17.3: Old rot in girt over summer beam. Damage in girt on far side of summer beam has old repair with let in timber (see 17.2 above)

Original bladed scarf joint in front roof plate (see 13.4 and 13.6 for photos)



17.4: Drawing showing top of bridled scarf joint in Boardman House (adapted from Cummings, *Framed Houses of Massachusetts Bay*).



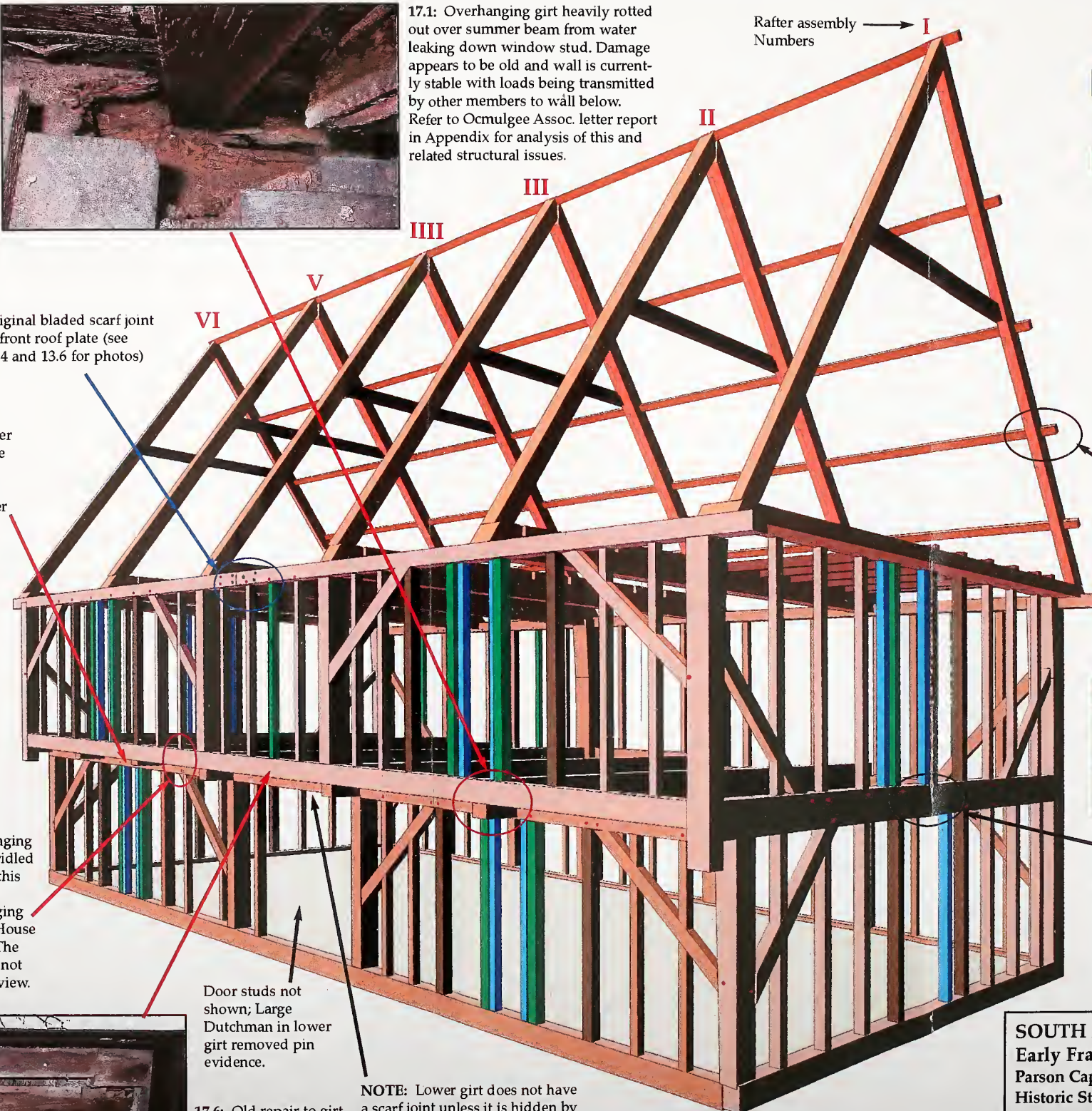
17.5: Splice in overhanging girt may be original bridled scarf joint. The use of this type of scarf joint also occurs in the overhanging girt at the Boardman House in Saugus (see 17.4). The blades of the scarf are not visible in this bottom view.



Door studs not shown; Large Dutchman in lower girt removed pin evidence.

17.6: Old repair to girt with piece spliced in.

NOTE: Lower girt does not have a scarf joint unless it is hidden by the casing over the heating pipes at the west chimney post.



Rafter assembly Numbers

Blue indicates studs added in 18th century to frame new windows

Green indicates original studs removed in 18th century to install new windows

Red dots on girts and posts indicate verified locations of pins for original studs and braces.

Studs and braces without marked pins have been located conjecturally.

End gable studs are not shown.

See 15.7 for photo of how Dow extended purlins to restore verge boards spaced out from gable wall



Area of past rot and insect damage in girt repaired by Dow with a crude Dutchman let into the exterior side is considered stable.

SOUTH AND EAST FACADES

Early Framing
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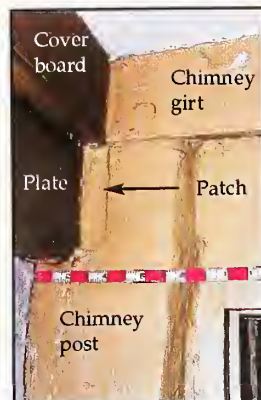
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DRAWING NOT TO SCALE



18.1: Chimney bay rear girt tenon (A) has almost completely pulled out of its mortise in the post (B) due to past movement of the frame from major rear sill deterioration repaired by Dow in 1913. The hall girt has also partially pulled out of its mortise in this post (see 8.5), and other long past movement is apparent at the roof plate/chimney posts joints (see 18.2). Currently this condition is stable with the loads being transmitted to the sills by the studs, and the frame being effectively tied together by the sheathing rather than the pinned joints. Refer to Ocmulgee Assoc. letter report in Appendix for analysis of this and related structural issues.



18.2: Long past movement of rear wall framing outwards at the roof plate is evidenced by the wide patch in the notch for the plate at top of west chimney post. That the patch appears to be old and is not severely cracked indicates there is no substantial current movement.

Original Scarf Joint in rear roof plate

Refer to 15.4 for unusual purlin/rafter joint used in the chimney bay

The original presence of collar ties in bents V and VI was not confirmed.

- Blue indicates studs added in 18th century to frame new windows
- Green indicates original studs removed in 18th century to install new windows
- Red dots on girts and posts indicate verified locations of pins for original studs and braces.

Studs and braces without marked pins have been located conjecturally.

End gable studs are not shown.



All original first floor studs and braces were replaced with 2 x 4 studs in 1913 by Dow.

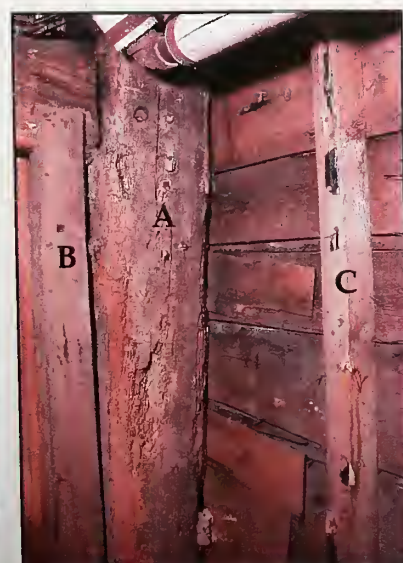
Corner post has had its bottom 6' replaced within the last 50 years. The post is substantially out of plumb.

DRAWING NOT TO SCALE

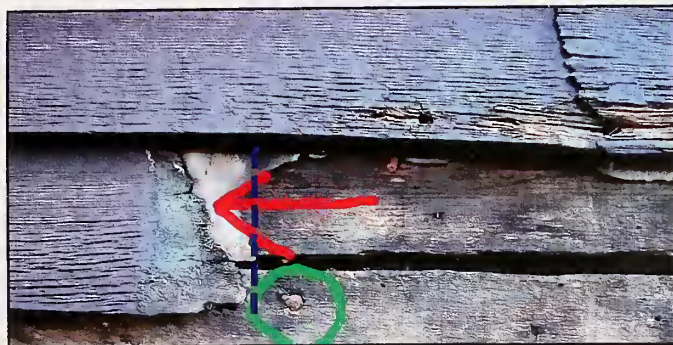


Photograph courtesy of SPNEA

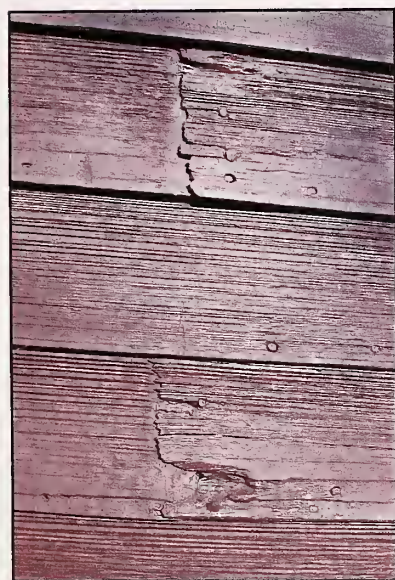
18.4: Northwest corner in 1913 showing new header (arrow) placed under rear girt with all new studs below. Dow completely replaced all early framing in the north wall with conventional new framing except the principal posts, which he ended out at the bottom. The extensive distortion still present in the rear wall appears to predate Dow's repairs, which secured the wall in its current state.



18.3: Chimney post (A) exhibits considerable old insect damage that had been concealed behind insulation for years. Framing should be left accessible whenever possible to facilitate routine monitoring to catch future deterioration problems in easterly stages. The bottom 2' of this post was replaced by Dow. The door stud to the left (B) is an early stud reused by Dow indicating he did not always use new wood, although in this case wire nails were used. The stud on the right (C) is one of Dow's replacement wall studs.



19.1: The bevel on the end of the Dow's clapboards was cut on a table saw rather than being skived with a draw knife. Because of the taper of the clapboard thickness, the resulting bevel edge indicated by the red arrow is angled rather than straight making the overlap of the clapboards ends minimal. When done with a drawknife the bevel is uniformly about 2" wide (the blue line indicates where the bevel edge should be), making a more watertight overlap.



19.2: Many clapboards have splits and small missing pieces at their ends. In some cases these gaps were filled with epoxy in the 1975 work, making selective replacement more difficult.



19.3: Since the 1950's red cedar has been used for replacement clapboards rather than matching Dow's white oak. These have a much smoother texture than the oak. The ones installed since the 1970's are especially obvious because the application of paint since then has prevented any weathering.



19.5: Another example of deeply weathered clapboards and trim from the south facade at the overhanging girt.



Photograph from Topsfield Historical Society

19.6: Newspaper photograph from 1975 showing the amount of clapboard replacement done in the 1975 work using red cedar rather than white oak. These clapboards are still visually obvious as shown in 19.3 above. Close examination reveals that quite a few other clapboards have been replaced over the years.



19.4: 1936 Historic American Building Survey (HABS) photo showing the house after it had been weathering without paint for 23 years as Dow intended it to be presented. The rear shed that was replaced in 1974 is also shown along with the furnace chimney as a tall brick stack. It was reduced in height and covered with clapboards in 1999. 19.7 below shows a close up of the weathered clapboards and trim. 1.2 shows the same view in color during the 1960's with some of the warped clapboards having been replaced, but still left to weather naturally.



19.7: 1936 HABS photo of the southeast corner showing the tendency of Dow's clapboards to warp when left to weather without paint. This illustrates the maintenance trade off in following Dow's interpretation of leaving the exterior without paint. Going back to an unpainted exterior will be true to Dow's intention, but require more frequent clapboard and trim replacement.



19.8: Window frame trim on many windows is deeply split and requires replacement. This trim seems to be only about 1/2" thick, making replacement simple as long as there is not deeper deterioration. In some cases the pintles are broken or the wood they are seated in is rotted making the sash loose and likely to fall out if opened. The window frames appear to be made of 1" thick stock (i.e., 5/4), but their relationship to the sheathing and other construction details are not known.

CLAPBOARDS AND TRIM

Condition Issues

Parson Capen House, Topsfield, MA

Historic Structure Report

Finch & Rose

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20.1: Northwest corner showing moss growth from chronic dampness and the grade sloping into the narrow gravel drainage channel at along the rear foundation. Note that sill and water table are nearly at grade. Substantial regrading and a French drain should be considered to better divert water away from the rear foundation.



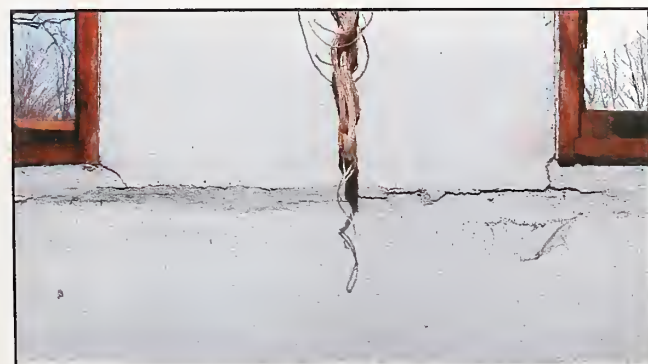
20.2: Sill at front of parlor basement and chimney girt show some light colored frass and exist holes indicating possible active insect infestation (probably powder post) as well as long past activity. Limited testing with a drill did not find deep deterioration.



20.3: A few of the hall cellar joists exhibit modest rot at the north sill. The damage was shallow, but should be monitored for progressive damage along with reducing the moisture problems along the north foundation.



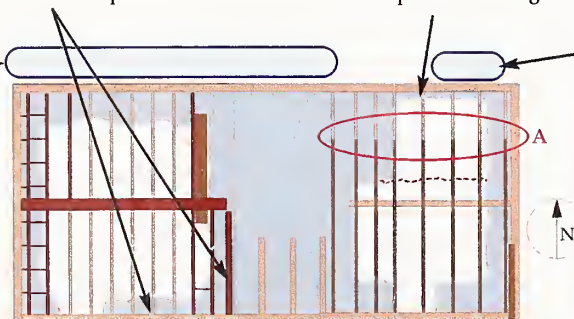
20.4: All the hall cellar joists have had their ends replaced with sisters added to reinforce the splice about 4' from the north wall (circle marked "A" on plan 20.6), probably by Dow in 1913. Rot damage to the old joist predates the repair. The subfloor was also replaced. Most of these splices are hidden by boarding over the furnace area.



20.5: Buckled plaster between the front windows of the parlor. Wayne King suggests this is related to the plaster substrate and previous plaster repairs rather than structural problems in the sill below. When the wall is opened up to repair the plaster the cause can be determined.



20.9: Window in north wall of parlor showing fresh damage from a squirrel getting into the house. Other windows show similar damage from past squirrel episodes. There is no screening on the chimney top to prevent squirrels from getting in through the open fireplace flues. Stainless steel hardware cloth should be installed unobtrusively on the chimney top as soon as possible.



20.6: Plan of cellar.

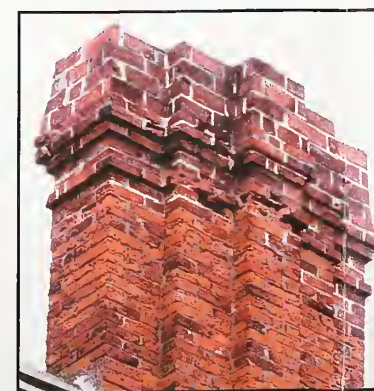
NOTE: Most framing in cellar has been sistered and exhibits varying amounts of past deterioration due to chronic dampness. Debris should be cleaned out, ventilation improved, and conditions routinely monitored.



20.10: Crack in chimney stack and minor brick spalling at the stairs. These defects, which are a function of the relatively low strength first period bricks, are benign as long as no dramatic increase is observed. The spalling is a function of dampness rising in the masonry from the basement and soil below. Repairing the masonry with stronger bricks and modern cement mortar (or even lime as the original is clay) is likely to cause further cracking rather than alleviate it.



20.7: Roof drainage is trapped along the rear sill by the grading and the rear furnace flue enclosure causing substantial rot to the sheathing and possibly the sill. Note the moss growing on the water table.



20.11: Chimney has a substantial number of loose and/or deeply spalled bricks and defective mortar joints; a few could fall out and pose a potential safety hazard. Repairs were last done in 1975. The spalling in the lower section is due to excessively soft old bricks being used by Dow in hard mortar, and cannot be effectively stopped.



20.8: Northeast corner, stack for furnace flue, and link to 1964 ell. The combination of the short valley on the link roof (arrow) and the flue stack concentrates considerable roof runoff on foundation below. The resulting dampness lingers due both to the grading and the lack of sunlight on the north facade. There is a long history chronic deterioration in this area which the damage shown in 20.6 and 20.2 demonstrates to be ongoing. Plans to reconfigure the ell should include measures to reduce the dampness in this area, perhaps including removal of the furnace flue.

CELLAR AND MISC. AREAS
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